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Chapter 7
Reading literacy in PIRLS 2011

Tara Concannon-Gibney and Gerry Shiel

Introduction

This chapter takes an in-depth look at the performance of pupils in Ireland on the PIRLS 2011 reading items. In doing so, it seeks to situate PIRLS in the context of the Primary School English Curriculum (PSEC) (DES/NCCA, 1999a), National Assessments of English reading, and initiatives arising from *Literacy and Numeracy for Learning and Life* (DES, 2011).

First, the chapter reflects on the definition of reading literacy in PIRLS and looks at links between the PIRLS assessment framework, the PSEC and National Assessments. Second, it looks at performance on the PIRLS International Benchmarks – descriptions of performance at different points on the PIRLS reading literacy scale – and the proportions of pupils in Ireland and internationally achieving at each Benchmark. Third, it provides examples of two passages of text used as part of the assessment. Fourth, it compares the performance of pupils in Ireland to that of pupils internationally on a selection of associated test items. Fifth, it examines the performance of boys and girls on the selected PIRLS items. The concluding section reflects on the outcomes of PIRLS, and suggests some implications for curriculum and instruction. Readers should note that this chapter examines only one aspect of the PIRLS 2011 data. Those who would like more general information about PIRLS or about PIRLS and TIMSS 2011 are referred to Chapter 1 of this volume (Eivers & Clerkin, 2013).

As outlined in more detail in the national report by Eivers and Clerkin (2012), Ireland's overall performance in PIRLS was strong. Pupils in Fourth class in Ireland ranked 10th of 45 participating countries, with a mean score of 552 points – well above the PIRLS international centrepoint of 500. Just five countries achieved mean scores that were significantly higher than Ireland's. The gap between the mean score of pupils in Ireland and in the highest-scoring country (Hong Kong) was 19 points (just under one-fifth of a standard deviation). In Ireland, girls achieved an average score of 559 points, compared with an average of 544 for boys. The 15-point gap, which is statistically significant, is marginally smaller than the overall international average gender difference (17 points). As Ireland's overall performance was well above average, pupil performance on most test items was also well above average, as will be apparent in the section examining performance on selected items.

Prior to 2011, the last international study of reading literacy in which primary-level pupils in Ireland had participated was the IEA Reading Literacy Study in 1991. In that study, nine-year-olds in Ireland (pupils in Third class) ranked 12th of 27 participating countries/systems, achieving a mean score 509 (Martin & Morgan, 1994). While this was above the international average of 500, it was significantly lower than the mean scores of pupils in eight countries/systems, and was considerably lower (by one-half of a standard deviation) than the mean score of the highest-scoring country (Finland, 560 points). In the Reading Literacy Study, boys in Third class in Ireland had a mean score that was 15 points lower than that of females – about the same size gap as in PIRLS 2011, though marginally larger than the international difference of 12 points in favour of girls in 1991.

Definitions of reading literacy and links across curriculum and assessment frameworks

This section examines definitions of reading literacy and explores links between the PIRLS assessment framework, the PSEC and National Assessments. First, the definition of reading literacy in PIRLS is considered:

> Reading literacy is defined as the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment (Mullis, Martin, Kennedy, Trong, & Sainsbury, 2009, p. 11).

Significant aspects of this definition include reference to constructing meaning from different text types (i.e., reading is viewed as an active, meaning-making process), the recognition that learning to read is a social process for young children, and the acknowledgement that children read to learn and to experience enjoyment.

The definition of reading underpinning the two most recent National Assessments (NAER 2004, NA 2009) is quite similar to that found in PIRLS in that it emphasises reading as a constructive process, and recognises that young children read for enjoyment. The National Assessments definition goes beyond PIRLS by specifying in more detail the various sources of knowledge that interact in the construction of meaning, including the reader's existing (prior) knowledge:

> Reading is the process of constructing meaning through the dynamic interaction among the reader's existing knowledge, the information suggested by the written language, and the context of the reading situation. Young readers read to learn, to participate in communities of readers, and for enjoyment (Eivers, Shiel, Perkins, & Cosgrove, 2005, p. 15).

The definition of literacy underpinning the recent literacy and numeracy strategy (DES, 2011) is broader than the definition of reading literacy in PIRLS or the National Assessments, in that it refers to oral language and writing as well as reading, while also making reference to digital media:

> Traditionally we have thought about literacy as the skills of reading and writing; but today our understanding of literacy encompasses much more than that. Literacy includes the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media. Throughout this document, when we refer to "literacy" we mean this broader understanding of the skill, including speaking and listening, as well as communication using not only traditional writing and print but also digital media (DES, 2011, p. 8).

PIRLS framework and item specifications

PIRLS is designed to provide a snapshot of reading literacy achievement of pupils in their fourth year of formal schooling. In Ireland, pupils in Fourth class completed PIRLS.[1] The PIRLS test comprised ten reading passages, spread over multiple test booklets, which were divided equally across two reading purposes: reading for Literary Experience and to Acquire and Use Information (Table 7.1). Within each of the two reading purposes, PIRLS items measured four comprehension processes: focus on and retrieve explicitly stated information,

[1] For international comparison purposes, Infants classes are classified as ISCED 0 (or pre-primary). Primary (or ISCED 1) is considered to start at First class.

make straightforward inferences, interpret and integrate ideas and information, and examine and evaluate content, language and textual elements. As shown in Table 7.1, performance on PIRLS item types is reported for:

- two **purpose** subscales: Literary and Informational.
- two **process** subscales: Retrieve/Infer (based on items categorised as retrieving explicitly stated information or making straightforward inferences); and Interpret/Evaluate (based on items categorised as interpreting and integrating, or examining and evaluating).

PIRLS used multiple-choice and constructed-response items, with about 50% of items in each format. Constructed-response items were scored by trained markers in participating countries, using procedures designed to ensure high levels of reliability.

Table 7.1: Reading purposes and processes in the PIRLS 2011 assessment framework, and associated subscales

	Framework Element	Subscales
Purposes	For literary experience (50%) To acquire and use information (50%)	Literary Experiences (50%) Acquire/Use Information (50%)
Processes	Retrieve explicitly stated information (20%) Make straightforward inferences (30%)	Retrieve/Infer (50%)
	Interpret and integrate ideas and information (30%) Examine and evaluate content, language and textual elements (20%)	Interpret/Evaluate (50%)

PSEC content – Third and Fourth classes

The PSEC consists of two documents:

- curriculum content (DES/NCCA, 1999a) that is grouped by successive class groups (for example, Third and Fourth class have a common curriculum).
- teacher guidelines (DES/NCCA, 1999b) for instruction across reading, writing and oral language for pupils throughout their primary school experience.

While the documents specify broad objectives and give examples of methodologies, each school is responsible for enactment of the curriculum at local level and is required to develop a school plan that states which objectives they have chosen for a particular class level and the particular methodologies adopted by the school that are appropriate for their particular context. This process is supported by whole-school evaluation and, most recently, by school self-evaluation.

Within the strands of reading, writing and oral language, content is presented in four strand units at each level: receptiveness to language, competence and confidence in using language, developing cognitive abilities through language, and emotional and imaginative development through language. The PSEC calls for the integration of oral language, reading and writing, and there is a strong emphasis on developing positive attitudes towards reading through well-stocked classroom libraries, regular opportunities to pursue personal interests in reading and frequent discussions about texts with teachers and peers. Teachers are encouraged to engage their pupils in a wide range of genres including narrative, expository, documents and poetry, and reading across different curricular areas is strongly

recommended. The development of pupils' oral language is prioritised and teachers are encouraged to teach reading using a range of approaches.

The PSEC delineates the importance of not just learning language, but also using language as a learning tool. This is particularly relevant around Fourth class, when the focus turns from learning to read to reading to learn. While the curriculum documents do not mandate particular textbooks or materials, class readers, novels, library books and large format books are mentioned as possible classroom resources. Parental involvement in language learning is also strongly recommended.

The PSEC encourages Irish primary schools to use a range of assessments (both formal and informal) to monitor pupils' progress in literacy. While NA 2009 (Eivers et al., 2010) found that most schools conduct standardised tests in every grade level, the DES's (2011) national strategy for literacy and numeracy and subsequent circulars have mandated that all schools carry out standardised tests on a yearly basis in Second, Fourth and Sixth classes, and report summarised results to the DES, board of management and parents. In the future, these results will be compared to both school-based and national targets for literacy (and numeracy).

The PSEC states that "the ultimate objective of reading is comprehension" (DES/NCCA, 1999b, p.61) and that comprehension strategies and skills should be taught in a cyclical manner, beginning with basic recall and predictions in the earlier grades and progressing to skills such as analysis, synthesis, inference and deduction by Third and Fourth class. There is some criticism of this approach to comprehension as other research emphasises the importance of developing higher order comprehension strategies from the outset of instruction (Pressley, 2002).

The curriculum for Third and Fourth class stresses the importance of comprehension tasks being purposeful and authentic, and it specifies appropriate activities for building comprehension (including scanning, skimming, search-reading, reflective reading, cloze procedures, sequencing tasks, prediction assignments, study reading, finding word meanings in context and writing personal responses). Pupils are also expected to develop some basic information retrieval skills, such as using tables of contents, indexes and chapter headings, and strategies for interpreting diagrammatic information.

Some concerns in relation to the PSEC include the static nature of reading standards at national level since its inception (Eivers et al., 2005; DES, 2011), the lack of emphasis on balanced literacy (Eivers et al., 2010), over-attention to constrained skills taught out of context (Kennedy et al., 2012) and a need to further develop metacognitive learning (Eivers et al., 2010). Curriculum overload has also put pressure on the allocation of time for literacy instruction (NCCA, 2005, 2010), which is currently being extended.

Comparing PIRLS and PSEC

In examining how the PIRLS assessment aligns with the PSEC, it is helpful to discuss the types of reading tasks that are involved, and the manner in which pupils are expected to respond to a text. PIRLS includes two reading purpose subscales – reading for Literary Experience and reading to Acquire and Use Information, while the PSEC recommends that pupils in Fourth class read across a wide variety of genres, though the ratio of narrative and expository texts is not specified, and the balance seems to favour narrative texts to a greater extent than in PIRLS. Indeed, a review of class textbooks, conducted as part of the 2004 National Assessment of English Reading (Eivers et al., 2005), revealed that pupils in Irish classrooms experienced a very uneven split between the two reading purposes. While this was much more pronounced in the earlier grades (Eivers et al., 2010), it could have a cumulative effect across grade levels. Related to this, the most recent National Assessment

(Eivers et al., 2010) recommended that class libraries in Irish primary schools should include more of a balance of text types, rather than the current strong bias towards narrative texts.

Four types of comprehension processes are assessed in PIRLS: retrieve explicitly stated information, make straightforward inferences, interpret and integrate new ideas and information, and examine and evaluate text content and language. Pupils in Fourth class in Ireland will have had ample opportunities to develop the first two processes as they are to be found in PSEC content for earlier classes. However, the latter two processes only begin to be taught at Third and Fourth class level so it is likely that pupils undertaking PIRLS may have had limited instruction in these processes. The PSEC recommends the use of "real books" in the classroom, though they may be used in conjunction with class readers at Fourth class level. Therefore, pupils should have some degree of familiarity with the "authentic texts" used in PIRLS. There have been recent calls to reduce the reliance on the class reader as it persistently dominates classroom instruction in Ireland and tends to be associated with poorer reading achievement (Eivers et al., 2010).

While the PSEC seems to align reasonably well to the demands of the PIRLS assessment, the PIRLS framework recognises other extraneous factors that may affect pupil achievement, including teacher CPD, school climate, teacher attitude and home-school relations. CPD is a continual concern in relation to the Irish education system as, unlike many countries, teacher participation in formal CPD is generally not mandated, and uptake in literacy-related CPD is fairly limited (Eivers et al., 2010). While the national literacy and numeracy strategy (DES, 2011) makes reference to mandatory professional development for teachers, plans for this have not been announced to date. Chapter 5 (Clerkin, 2013) of this volume contains information on CPD as reported by teachers in PT 2011.

Comparing PIRLS and reading in the National Assessments

The framework underpinning the reading component of the National Assessments was revised prior to implementation of the 2009 assessment in Second and Sixth classes. As noted, the definition of reading underpinning the National Assessments is broadly similar to that of PIRLS, and the assessed reading processes are also very similar. However, the National Assessments also include an assessment of reading vocabulary, and performance is reported for reading vocabulary, reading comprehension and overall reading, and for the four reading subprocesses. There are no separate subscales for reading purposes. Moreover, multiple-choice items only are used in Second class, while at Sixth, two-thirds of the items follow a multiple-choice format and one-third follow a constructed-response format. In general, National Assessments tend to be more difficult for Irish pupils than PIRLS, since PIRLS is targeted at a broad range of reading ability among pupils in 45 countries, including some where average pupil achievement is much lower than in Ireland.

Performance at the International Benchmarks

In addition to reporting performance on an overall reading literacy scale, and on four subscales, PIRLS reported on performance at four International Benchmarks: the Advanced International Benchmark (625 points), the High International Benchmark (550), the Intermediate International Benchmark (475), and the Low International Benchmark (400). A key feature of the PIRLS International Benchmarks is that they include descriptions of what pupils scoring at each Benchmark can achieve (see next section) as well as estimates of the percentages of pupils in each country achieving them.

In Ireland, twice as many pupils as at the international median reached the Advanced International Benchmark in PIRLS 2011 (16% in Ireland, and 8% internationally) (Table 7.2). Only Singapore had a markedly higher percentage of pupils (24%) at this Benchmark. The

percentages achieving this Benchmark in other high-scoring countries were similar to Ireland – ranging from 19% in Northern Ireland and the Russian Federation to 17% in Finland.

Over half (53%) of pupils in Ireland reached at least the High International Benchmark compared with the international median of 44% (Table 7.2). These percentages are cumulative and therefore include those scoring at Advanced or High Benchmarks. In general, high-scoring counties had more pupils than Ireland reaching this Benchmark – 67% in Hong Kong, 63% in Finland and in the Russian Federation, and 62% in Singapore. The proportion reaching the High Benchmark in Northern Ireland (58%) is slightly, but not markedly, higher than the percentage in Ireland.

In Ireland, 97% of pupils achieved the Low International Benchmark, compared with an international median of 95%. Corresponding estimates for other high-scoring countries were 99% for Finland, Hong Kong and the Russian Federation, and 97% for Singapore and Northern Ireland. Only 3% of Irish pupils did not reach the Low International Benchmark, meaning that PIRLS cannot describe the reading skills of these pupils. It should be noted that other international assessments that include reading literacy (e.g., the OECD's PISA) typically allocate greater proportions of pupils to the lowest (off-scale) levels of achievement. In NA 2009, 10% were categorised as scoring below the lowest proficiency level. The low percentage in Ireland achieving below the Low International Benchmark is a function of cut-off points used in establishing PIRLS Benchmarks, the overall distribution of achievement in PIRLS, and the relatively strong performance of pupils in Ireland.

Table 7.2: Cumulative percentage of pupils, Ireland and the international median[2], reaching the PIRLS 2011 International Benchmarks for overall reading

	Advanced	High	Intermediate	Low
Ireland	16	53	85	97
International median	8	44	80	95

Test items were also categorised by difficulty, and assigned to an International Benchmark level. Thus, for each Benchmark, it was possible, based on items at that Benchmark, to develop descriptions of the types of reading processes on which pupils would be expected to be successful (see the national report by Eivers and Clerkin, 2012 [Table 3.1], and Mullis, Martin, Foy and Drucker, 2012 [Exhibit 2.1]). In the next section, two released test units (pieces of text and related test items) are described. This is followed by a section describing Irish pupils' performance on a selection of sample items, and illustrating the skills that exemplify the four International Benchmarks.

PIRLS also provided estimates of the percentages of pupils at each Benchmark on Literary and Informational scales (Table 7.3) and on the Retrieve/Infer and Interpret/Evaluate scales (Table 7.4). In Ireland, the percentages of pupils reaching each Benchmark on the Retrieve/Infer and the Interpret/Evaluate subscales are virtually identical, and are well above the PIRLS averages. [3] However, slightly more pupils achieved the Advanced Benchmark on the Literary scale (20%) than on the Informational scale (16%), reflecting the better Irish performance overall on the Literary scale. The international percentages shown in Tables 7.3 and 7.4 are almost identical across subscales, indicating little variation in the percentages of pupils reaching each Benchmark.

[2] The values shown as the international median for each Benchmark are the percentages that divide countries evenly. For example, Advanced has a median value of 8%. This means that in half of participating countries more than 8% of pupils reached the Advanced Benchmark, and in the other half, fewer than 8% did so.
[3] Note that, whereas Table 7.2 provides international medians, Tables 7.3 and 7.4 provide international means, which tend to be lower.

Table 7.3: Cumulative percentage of pupils reaching the 2011 International Benchmarks on the Literary and Informational subscales, Ireland and international average

	Literary				Informational			
	Adv.	High	Inter.	Low	Adv.	High	Inter.	Low
Ireland	20	56	85	96	15	52	84	97
PIRLS	10	38	70	87	9	38	70	88

Table 7.4: Cumulative percentage of pupils, reaching the 2011 International Benchmarks for Retrieve/Infer and Interpret/Evaluate subscales, Ireland and international average

	Retrieve/Infer				Interpret/Evaluate			
	Adv.	High	Inter.	Low	Adv.	High	Inter.	Low
Ireland	16	54	84	96	17	54	85	97
PIRLS	9	38	70	88	9	38	70	87

Examples of reading texts

Four of the ten passages (and their associated items) used in PIRLS 2011 were released in December 2012. Two were Literary texts (titled *Enemy Pie* and *Fly, Eagle, Fly*) and two were Informational (*Discover the Fun of Day Hiking* and *The Giant Tooth Mystery*).

In this section, *Enemy Pie* and *Discover the Fun of Day Hiking* are presented as representative texts, as they exemplify the different elements of the framework and also include some large gender differences. All four released texts and their questions (shown in the format in which they were presented to pupils) are available at http://www.erc.ie/documents/pirls_2011_reading_items.pdf. The same document provides information on how constructed-response items (where pupils write the answers to questions) are scored, and summarises information on Irish and international performance on each test item.

The presentation of the items and the commentary that follows is intended to highlight the types of reading literacy items used in PIRLS, including those that challenged pupils in Ireland and those they found easy. However, as noted, Irish pupils performed well above the PIRLS centrepoint, meaning that relatively few items were very challenging for Irish pupils.

The first passage, *Enemy Pie* (Figure 7.1), is slightly less than 800 words in length and is categorised as a Literary text. A narrative text, it formed part of the PIRLS Reader – a document comprising two texts (one Literary and one Informational) formatted in the style of a real book, and perhaps providing pupils with a more authentic reading experience than is possible when texts and test items are together in test booklets. Pupils assigned the PIRLS Reader (one of the thirteen booklets presented to pupils) were asked to respond to questions about the texts in a separate answer booklet. In the PIRLS Reader, *Enemy Pie* was spread over four pages and several coloured illustrations were provided. Here, it is presented in compressed format, without illustrations. In all, *Enemy Pie* has 16 items, of which three will be discussed in the next section.

The second passage, *Discover the Fun of Day Hiking*, is categorised as a text employed by pupils to Acquire and Use Information. In PIRLS 2011, it was folded as a brochure and appended to one of the test booklets. Pupils could detach it from the test booklet and fold and unfold it as needed. Associated questions were in the accompanying test booklet. Figure 7.2 shows the brochure, including the text, a map, a table and illustrations. In all, *Day Hiking* has 12 items, of which three are discussed in the next section.

Figure 7.1: *Enemy Pie* text

Enemy Pie *by Derek Munson*

It was a perfect summer until Jeremy Ross moved in right next door to my best friend Stanley. I did not like Jeremy. He had a party and I wasn't even invited. But my best friend Stanley was.

I never had an enemy until Jeremy moved ifcnto the area. Dad told me that when he was my age, he had enemies, too. But he knew of a way to get rid of them. Dad pulled a worn-out scrap of paper from a recipe book. "Enemy Pie," he said, satisfied.

You may be wondering what exactly is in Enemy Pie. Dad said the recipe was so secret, he couldn't even tell me. I begged him to tell me something—anything. "I will tell you this, Tom," he said to me. "Enemy Pie is the fastest known way to get rid of enemies." This got me thinking. What kinds of disgusting things would I put into Enemy Pie? I brought Dad worms and rocks, but he gave them right back.

I went outside to play. All the while, I listened to the sounds of my dad in the kitchen. This could be a great summer after all. I tried to imagine how horrible Enemy Pie must smell. But I smelled something really good. As far as I could tell, it was coming from our kitchen. I was confused.

I went inside to ask Dad what was wrong. Enemy Pie shouldn't smell this good. But Dad was smart. "If it smelled bad, your enemy would never eat it," he said. I could tell he'd made this pie before. The oven buzzer rang. Dad put on oven gloves and pulled out the pie. It looked good enough to eat! I was beginning to understand. But still, I wasn't sure how this Enemy Pie worked. What exactly did it do to enemies? Maybe it made their hair fall out, or their breath stink. I asked Dad, but he was no help.

While the pie cooled, Dad filled me in on my job. He whispered. "In order for it to work, you need to spend a day with your enemy. Even worse, you have to be nice to him. It's not easy. But that's the only way that Enemy Pie can work. Are you sure you want to do this?" Of course I was. All I had to do was spend one day with Jeremy, then he'd be out of my life. I rode my bike to his house and knocked on the door.

When Jeremy opened the door, he seemed surprised. "Can you come out and play?" I asked. He looked confused. "I'll go and ask my mum," he said. He came back with his shoes in his hand. We rode our bikes for a while, then ate lunch. After lunch we went over to my house. It was strange, but I was having fun with my enemy. I couldn't tell Dad that, since he had worked so hard to make the pie.

We played games until my dad called us for dinner. Dad had made my favourite food. It was Jeremy's favourite, too! Maybe Jeremy wasn't so bad after all. I was beginning to think that maybe we should forget about Enemy Pie. "Dad", I said, "It's really nice to have a new friend." I was trying to tell him that Jeremy was no longer my enemy. But Dad only smiled and nodded. I think he thought I was just pretending.

But after dinner, Dad brought out the pie. He served up three plates and passed one to me and one to Jeremy. "Wow!" Jeremy said, looking at the pie. I panicked. I didn't want Jeremy to eat Enemy Pie! He was my friend! "Don't eat it!" I cried. "It's bad!"

Jeremy's fork stopped before reaching his mouth. He gave me a funny look. I felt relieved. I had saved his life. "If it's so bad," Jeremy asked, "then why has your dad already eaten half of it?" Sure enough, Dad was eating Enemy Pie. "Good stuff," Dad mumbled. I sat there watching them eat. Neither one of them was losing any hair! It seemed safe, so I took a tiny taste. It was delicious! After dessert, Jeremy invited me to come over to his house the next morning.

As for Enemy Pie, I still don't know how to make it. I still wonder if enemies really do hate it or if their hair falls out or their breath turns bad. But I don't know if I'll ever get an answer, because I just lost my best enemy.

Figure 7.2: *Discover the Fun of Day Hiking* brochure

Planning Your Day Hike

- Pick somewhere to go that will be fun and interesting. If in a group, consider everyone when choosing where to go.
- Find out the distance of the hike and how much time it is supposed to take.
- Check out the weather conditions and forecast. Plan and dress the right way for the weather.
- Pack light. Don't make the weight of what you will carry too heavy (see checklist).

Packing Checklist

- ☐ Plenty of water – to keep from getting thirsty
- ☐ Food – high energy snacks or take a picnic lunch
- ☐ First Aid Kit – in case of blisters, scrapes and scratches
- ☐ Insect repellent – to protect from bites (for example – ticks, bees, mosquitoes, and flies).
- ☐ Extra socks – feet may get wet
- ☐ Whistle – important if going alone, three short whistles mean you are in trouble and need assistance
- ☐ Map and compass – very important for more difficult hikes

Keeping Safe on Your Day Hike

- **Start early.** This will give you plenty of time to enjoy your hike and still get back before dark.
- **Stay on hiking trails** unless you know the area.
- **Pace yourself.** Do not hike too quickly so that you can save your energy. When in a group, go only as fast as the slowest member.
- **Be careful where you are walking.** Watch out for things you might trip over like loose rocks, piles of leaves, and sticks. Take care through slippery areas . If you need to go into water, make sure you know how deep it is.
- **Look out for wildlife.** Be careful where you put your feet, when you pick up sticks or rocks, and before you sit down. Never approach animals in the wild. They may look cute and harmless, but they can be unpredictable and very protective of their territory.

IMPORTANT: Tell someone where you are going hiking and when you expect to return. This could help in case something happens and you get into trouble. Let him or her know when you get back.

Most of all, don't forget to have fun on your hike. Enjoy being outdoors. Look at all the interesting things around you. Learn to identify new places, plants, and animals. Appreciate the beauty of the land and nature, and get good healthy exercise too!

Discover the Fun of Day Hiking

Looking for something fun and interesting to do at home or on holiday?

One of the greatest ways to enjoy the outdoors is hiking, and day hiking is the most popular kind. It doesn't have to take much time or need any special equipment.

Day Hiking Is Fun and Good Exercise!

You are in charge! You can choose where you want to go, how long you want to be gone, and how fast you want to go. You can simply stroll along enjoying nature or challenge yourself with difficult and steep hiking trails. It is up to you!

See interesting new things! Hiking can take you places that cannot be seen any other way. You can go to beautiful areas and see spectacular views. Or you can go to remote areas that may have hidden valleys, waterfalls, or caves. Hiking can give you a chance to see plants, birds, and animals that live in the wild. You might even see remains of buildings and things that belonged to people who lived long ago.

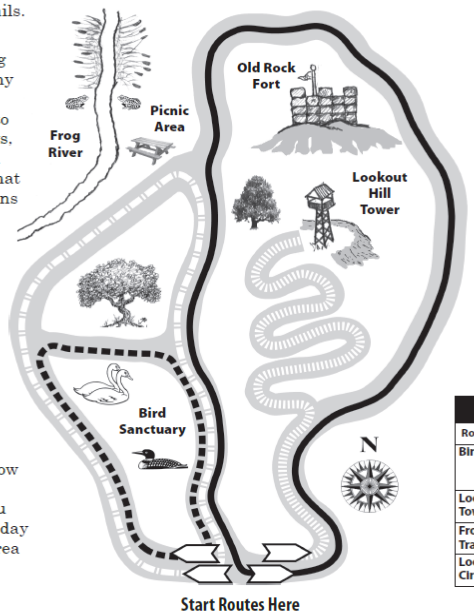
Keep physically fit! Walking is an excellent way to exercise, so hiking on a regular basis will help to keep you healthy. It provides time to think and can be relaxing. Hiking is a great way to spend time with your friends and family or to just spend a little time by yourself studying and enjoying nature.

Explore Lookout Hill

The map and map key for Lookout Hill show how you can choose the day hike that you would like best and the kinds of things you can see and do. It gives you an idea about day hiking in case you want to find a hiking area near where you live.

Lookout Hill

A Hike Full of Adventures



Choose which route to take!

Use one of our suggestions, or make up a route of your own.

Map Key

Route Name	Route	Time	Level	Description
Bird Walk	■ ■ ■	2 hours	Easy, Wheelchair access	Loop around the bird sanctuary
Lookout Tower Hike	▮▮▮▮▮▮▮	2 to 2.5 hours each way	Hard	Climb Lookout Hill and see the view
Frog River Trail	■ ▮ ■	3 hours	Medium	Hike to Frog River Picnic Area
Lookout Hill Circle	▬	5 hours	Medium	Hike around Lookout Hill to the Old Rock Fort

Analysis of a selection of released items

The previous section showed examples of two texts, upon which a total of 28 test items were based. This section provides examples of some of those test items, grouped by the International Benchmark at which they are categorised. Also included are details about Irish performance on each item, relative to the international PIRLS average, and information on the performance of boys and girls. Each item has a unique ID,[4] which identifies the source text, the item's location in the sequence of the text and whether it is a multiple-choice or constructed-response item. For example, Figure 7.3 contains a sample item from a PIRLS passage called *Fly, Eagle, Fly,* a released passage, though not one of those described in detail in the previous section. The item ID is FEF01_MC. The first part of the ID (FEF) indicates that the item is from *Fly, Eagle, Fly.* The item shown is the first item (denoted by 01) related to the *Fly, Eagle, Fly* text, and it is in multiple-choice format (MC). All Figures provide information on the performance of Irish girls and boys on the items selected for analysis. Differences, where they are viewed as substantive (i.e., a difference of at least 10%), are discussed in a subsequent section, along with additional items that show similarly large differences.

Items at the Low International Benchmark

As can be seen from Figure 7.3, pupils at the Low International Benchmark can display only very basic reading skills. Their skills are largely limited to retrieving and reproducing explicitly stated information from within the text. Inferential and evaluative skills do not feature. Just one PIRLS 2011 released item was categorised as being at the Low International Benchmark (i.e., very easy, internationally).

Figure 7.3: Summary description of the Low International Benchmark, and an exemplar item

Low International Benchmark

Pupils at this Benchmark are expected to demonstrate the following skills when reading …

LITERARY TEXTS

- Locate and retrieve an explicitly stated detail.

INFORMATIONAL TEXTS

- Locate and reproduce two or three pieces of information from within the text.
- Locate and reproduce explicitly stated information that is at the beginning of the text.

[CONTEXT: Fly, Eagle, Fly is an African tale about a farmer who, while searching for his calf, finds an eagle chick, takes it home and rears it with his chickens.]

Item ID: FEF01_MC

What did the farmer set out to look for at the beginning of the story?

a) a calf*
b) herders
c) rocky cliffs
d) an eagle chick

Purpose: Literary **Process:** Focus on and retrieve explicitly stated information
Correct: Ireland: 93% PIRLS: 89% Irish Girls: 95% Irish Boys: 91%

[4] These IDs were created for this chapter, and are not included with the items as presented in their original format on www.erc.ie/pirlstimss.

The multiple-choice item was from *Fly, Eagle, Fly*, and was categorised as assessing retrieval of explicitly stated information. In Ireland, 93% of pupils responded correctly to the item, compared to a PIRLS average of 89%. This item is very straightforward, requiring pupils to retrieve explicitly stated information. The answer is stated in the first sentence of the text ("A farmer went out one day to search for a lost calf"). It should be noted that the distractors – herders, rocky cliffs and eagle chicks – can be found in adjacent sentences. The gender difference on this item, 4% in favour of girls, is relatively small.

Items at the Intermediate International Benchmark

Figure 7.4 summarises some of the skills displayed by pupils responding to items at the Intermediate International Benchmark. For Literary texts, these include making straightforward inferences about a main character's attributes, feelings and motivations. For Informational texts, they include locating and reproducing two or three pieces of information from the text. Two exemplar items are shown, one from *Enemy Pie*, and the other from *Discover the Fun of Hiking*.

Item EP13_MC is from *Enemy Pie*. It provided pupils with a short statement from the text ("After dessert, Jeremy invited me to come over to his house next morning") and asked them to indicate, from among four choices, what the statement suggested about the two boys in the story. In Ireland, 90% of pupils selected the correct response while, internationally, 79% of pupils did so. Here, as in most other countries, a majority of pupils were able to dismiss the other options present. The text immediately preceding the statement supports the view that the boys were becoming friends (e.g., Tom's concern that Jeremy might eat the Enemy Pie), so it is not surprising that pupils dismissed alternative explanations and plumped for the possibility that the boys might become friends in the future. Pupils in most countries had little difficulty with this item – for example, 95% of pupils in Hong Kong and 94% in Finland selected the correct response. However, only 81% of pupils in New Zealand answered correctly.

In Ireland, 2.2% of pupils omitted this item (it was either not reached or simply skipped). This compares with 4.3% internationally and just 0.3% in Singapore and 0.4% in Hong Kong. The fact that this item was skipped by relatively small numbers, even though it appeared in 13th position in an item set, may be related to the fact that most pupils did not find it difficult, even though it falls under the general category of examining and evaluating content, language and text structures (i.e., arguably the most complex of the process skills assessed).

Item DH02_CR, from *Discover the Fun of Day Hiking*, asked pupils to give two interesting things the leaflet said they might see on a day hike. Pupils could provide any of a number of features mentioned in the text, including hidden valleys, waterfalls, caves, spectacular views, or any of the locations on the map in the leaflet. Responses were scored as correct only where two (or more) interesting things were listed. No credit was given for listing only one feature. In Ireland, 74% of pupils cited two interesting things, compared with 63% internationally. Many of our key comparison countries had higher percent correct scores on this item than Ireland – Hong Kong (92%), Singapore (86%) and the Russian Federation (84%). However, pupils in both Finland (78%) and Northern Ireland (77%) performed at a broadly similar level to pupils in Ireland. The gender difference on this item, 12% in favour of girls, is reasonably large.

Figure 7.4 also shows some examples of answers supplied by Irish pupils. In the incorrect or incomplete examples, pupils recorded one "thing" rather than the required two. That is, they were unable to distinguish between features specific to the hike, such as the animals mentioned in the leaflet, and peripheral features such as other people on a day hike,

or their responses were at too high a level of generality ("exciting things"). At 1.5%, the percentage of Irish pupils who did not answer the question is again lower than the international average of 4.5%. In a number of countries, including England, Hong Kong, the Netherlands, Singapore and the United States, fewer than 1% of pupils failed to attempt to answer the item.

Figure 7.4: Summary description of the Intermediate International Benchmark, and exemplar items

Intermediate International Benchmark

Pupils at this Benchmark are expected to demonstrate the following skills when reading …

LITERARY TEXTS

- Retrieve and reproduce explicitly stated actions, events, and feelings.
- Make straightforward inferences about the attributes, feelings, and motivations of main characters.
- Interpret obvious reasons and causes and give simple explanations.
- Begin to recognise language features and style.

INFORMATIONAL TEXTS

- Locate and reproduce two or three pieces of information from within the text.
- Use subheadings, text boxes, and illustrations to locate parts of the text.

Item ID: EP13_MC

'After dessert, Jeremy invited me to come over to his house the next morning'.
What does this suggest about the boys?

a) They are still enemies.
b) They do not like to play at Tom's house.
c) They wanted to eat some more Enemy Pie.
d) They might be friends in the future.*

Purpose: Literary **Process:** Examine & evaluate content, language & textual elements

Correct: Ireland: 90% PIRLS: 79% Irish Girls: 94% Irish Boys: 87%

Item ID: DH02_CR
Give two interesting things the leaflet said you might see on a day hike

_____

Scoring information: Score **1/0**. **Two** correct "things" (e.g., caves, waterfalls, hidden valleys)
1 point:
You can see animals. You can see remains of buildings.
Might go to lookout hill. or a remote area that may have been hidden valleys.
Animals, water.
0 point: One or no correct "things" or too vague
You might see some cool animals, and also some exciting things.
Animals & people

Purpose: Informational **Process:** Focus on and retrieve explicitly stated information

Correct: Ireland: 74% PIRLS: 63% Irish Girls: 80% Irish Boys: 68 %

Items at the High International Benchmark

Figure 7.5 summarises some of the skills displayed by pupils at the High International Benchmark. For Literary texts, these skills include locating and distinguishing significant actions and details embedded across texts, and interpreting and integrating story events and character actions and traits from different parts of the text. For Informational texts, they include locating and distinguishing relevant information within a dense text or complex table, and integrating textual and visual information to interpret relationships between ideas.

Thus, the skills that pupils performing at the High International Benchmark are expected to demonstrate are more complex than those of pupils performing at the Intermediate International Benchmark in that there is a stronger emphasis on integrating ideas, whether from different parts of a Literary text, or between text and accompanying visual information in the case of Informational text.

Figure 7.5: Summary description of the High International Benchmark, and exemplar items

High International Benchmark

Pupils at this Benchmark are expected to demonstrate the following skills when reading…

LITERARY TEXTS

- Locate and distinguish significant actions and details embedded across the text.
- Make inferences to explain relationships between intentions, actions, events, and feelings, and give text-based support.
- Interpret and integrate story events and character actions and traits from different parts of the text.
- Evaluate the significance of events and actions across the entire story.
- Recognise the use of some language features (e.g., metaphor, tone, imagery).

INFORMATIONAL TEXTS

- Locate and distinguish relevant information within a dense text or a complex table.
- Make inferences about logical connections to provide explanations and reasons.
- Integrate textual and visual information to interpret the relationship between ideas.
- Evaluate content and textual elements to make a generalisation.

Item ID: EP11_MC

How did Tom feel when Dad passed the piece of Enemy Pie to Jeremy?

a) **Alarmed***
b) Satisfied
c) Surprised
d) Confused

Purpose: Literary — **Process:** Make straightforward inferences

Correct: Ireland: 76% PIRLS: 64% Irish Girls: 80% Irish Boys: 72%

Item ID: DH04_MC

Which section of the leaflet told you to wear the right clothes for the weather?

a) Discover the Fun of Day Hiking
b) **Planning Your Day Hike***
c) Packing Checklist
d) Keeping Safe on Your Day Hike

Purpose: Informational — **Process:** Focus on and retrieve explicitly stated information

Correct: Ireland: 55% PIRLS: 55% Irish Girls: 61% Irish Boys: 49%

Figure 7.5 provides two multiple-choice questions as examples of items at the High International Benchmark. The difference in the percentage of pupils answering each item correctly (either in Ireland or across PIRLS as a whole) is illustrative of the fairly broad range of item difficulties among items categorised as being at the High International Benchmark. Item EP11_MC relates to *Enemy Pie*, and asks how Tom felt when Dad passed the piece of Enemy Pie to Jeremy. The reading process underpinning this multiple-choice question is given as making a straightforward inference. The question is relatively difficult (76% correct in Ireland; 64% internationally) because the reader must shift from an earlier position –

Jeremy was Tom's enemy, and the perceived purpose of the Enemy Pie was to rid him of Jeremy for good – to one in which he was gradually becoming friends with Jeremy. It is possible that some pupils did not fully understand this shift, either because it was not obvious to them, or because they did not engage in a deep reading of the text.

Pupils in Finland did best on this item (91% answered correctly) while pupils in Northern Ireland (79%), the Russian Federation (78%), Singapore (73%) and Hong Kong (71%) all performed at about the same level as pupils in Ireland. In Ireland, 8% more girls than boys achieved a correct answer on this item, indicating that the item was somewhat more difficult for Irish boys relative to girls. The corresponding international difference was just 2%. In Ireland, just 2% of pupils skipped or did not reach this item, compared with an international average of 3.6%.

Item DH04_MC, based on *Discover the Fun of Day Hiking*, asked pupils to identify the section of the leaflet which told them to wear the right clothes for the weather (the correct section is Planning Your Day Hike). The question is identified as assessing the reading process of focusing on and retrieving explicitly stated information. In Ireland and internationally, 55% of pupils answered this question correctly. It is one of the few questions on which the performance of pupils in Ireland is not above the international average. Pupils in Hong Kong obtained the highest percentage of correct responses on this item (85%), followed by Chinese Taipei (73%) and Germany and Singapore (both 71%). Like in Ireland, pupils in Northern Ireland (58%) and England (59%) performed close to the international average.

It is noteworthy that 33% of pupils in Ireland – and almost identical percentages in Northern Ireland and England – selected response option C (Packing Checklist). Under the packing checklist section, would-be day hikers are advised to bring extra socks in case their feet get wet. Some readers in Ireland may have interpreted this to refer to clothes more generally, as indirect reference is also made to weather (feet may get wet). In doing so, they may have made an inference viewed by PIRLS as being incorrect. Just over 1% of pupils in Ireland and just over 2% internationally did not respond to the item.

Items at the Advanced International Benchmark

Skills that pupils scoring at the Advanced International Benchmark are expected to exhibit are more complex than those at the Intermediate and High Benchmarks. In the case of Literary texts, they include interpreting story events and character actions to provide reasons, motivations and character traits, with full text-based support (Figure 7.6). For Informational texts, they include integrating information across a text to provide explanations and interpret significance. Because skills at the Advanced Benchmark often involve interpretation and evaluation, and/or require pupils to cite evidence from the text, they typically follow a constructed-response format.

EP16_CR is an Advanced Benchmark item based on the *Enemy Pie* text. Pupils are asked to write what lesson they might learn from the story. The comprehension process underlying this question is identified as examining and evaluating context, language and textual elements (i.e., it contributes to the Interpret/Evaluate scale). The question can be regarded as a higher-level one as the answer is not stated explicitly in the text, but must be inferred by the reader, possibly by establishing a link between information in the text and the reader's own experience of relationships. The scoring guide for PIRLS indicates that, to receive credit, pupils are expected to indicate the importance of giving a relationship a chance to grow before deciding whether someone is your friend, or to state that it is possible to change how you feel about someone. In Ireland, 45% of pupils provided a correct response to this question, compared with 30% internationally. Pupils in Finland (41%), Hong Kong

(40%) and Northern Ireland (38%) performed close to the level of pupils in Ireland, while pupils in Singapore (36%) and the Russian Federation (28%) did a little less well. In Germany, 60% of pupils provided a correct answer, the highest score among participating countries.

Responses judged as being correct tended to focus on entertaining the possibility that a potential enemy might well be a friend (e.g., "Give people a chance, you might like them"). Pupils providing incorrect responses tended to over-generalise (e.g., "everyone has an enemy", or provided incomplete themes (e.g., "if you're nice to other people"). As a relatively difficult constructed-response item, the percentage of pupils who did not answer the item is slightly higher than for some of the preceding examples of items. Just 4% of pupils in Ireland either skipped or did not reach this question, compared with an international average of 11%.

The second example item at the Advanced International Benchmark, DH03_CR, is drawn from *Discover the Fun of Day Hiking*. It asks pupils to write two things they should keep in mind when hiking in a group. To obtain full credit (score two points), pupils had to make one suggestion that referred to interests and another that referred to ability. The reading comprehension process underpinning this question is identified as interpret and integrate ideas and information, and, like EP16_CR, it contributes to the Interpret/Evaluate scale. The answers to this question appear in somewhat different locations in the brochure. One thing to keep in mind can be found in the section on Planning Your Day Hike. Pupils must establish a link between the sentence "If in a group, consider everyone when choosing where to go", and the previous sentence "Pick somewhere to go that will be fun and interesting". The second thing to keep in mind can be found in the section on Keeping Safe on Your Daily Hike, under a subhead, Pace Yourself ("When in a group, go only as fast as the slowest member").

Hence, to respond correctly, pupils had to identify two pieces of information in different parts of the text, with no obvious link between them – one related to interest and the second to ability. Moreover, in the case of the information on interest, they had to link adjacent sentences in the text – something that might not occur if the reader missed the information on an initial reading of the text, and scanned the text to look for an idea in order to answer the question. An example of a response receiving full credit is given in Figure 7.6. This response includes reference to both ability ("only go as fast as the slowest member of the group"), and interest ("consider everyone when choosing where to go"). In Ireland, 16% of pupils received full credit (i.e., they provided separate responses relating to ability and to interest), while internationally, 10% of pupils did so. Among our key comparison countries, some had marginally higher percentages of pupils than Ireland achieving full credit on this item (Finland, 21%; Northern Ireland, Hong Kong, the Russian Federation and Singapore, 18%). Others, such as Australia, the United States (both 15%) and New Zealand (13%) had marginally lower percentages.

Just over half (52%) of pupils in Ireland and 38% internationally achieved at least partial credit (one point), indicating that they correctly identified one thing to keep in mind when hiking in a group. Pupils in Denmark did best (59% received at least partial credit). Among our key comparison countries, the percentages obtaining at least partial credit ranged from 56% in the Russian Federation to 46% in New Zealand.

Figure 7.6: Summary description of the Advanced International Benchmark, and exemplar items

Advanced International Benchmark

Pupils at this Benchmark are expected to demonstrate the following skills when reading …

LITERARY TEXTS

- Integrate ideas and evidence across a text to appreciate overall themes
- Interpret story events and character actions to provide reasons, motivations, feelings, and character traits with full text-based support.

INFORMATIONAL TEXTS

- Distinguish and interpret complex information from different parts of text, and provide full text-based support
- Integrate information across a text to provide explanations, interpret significance, and sequence activities
- Evaluate visual and textual features to explain their function

Item ID: EP16_CR

What lesson might you learn from this story?

_____

Scoring information: Score **1/0.** Importance of giving a relationship a chance to grow before deciding if someone is your friend, **or,** it is possible to change your mind about someone.

1 point:

Always try to be friends with your enemy and don't call people enemies if you don't know them.
If you spend a day with your enemies, they might become your friends
Don't dislike people unless you know them well

0 points:

If someone is mean to you, tell your mam or dad:.
That everyone has an enemy. If you're nice to other people

Purpose: Literary **Process**: Examine & evaluate content, language & textual elements

Correct: Ireland: 45% PIRLS: 30% Irish Girls: 55% Irish Boys: 36%

Item ID: DH03_CR

What are two things the leaflet told you to keep in mind when you are hiking in a *group?*

_____

Scoring information: Score **2/1/0. Two** correct suggestions – one about ability, one about interests – for full credit. **One** correct suggestion for partial credit.

2 points:

Only go as fast as the slowest member of the group; if in a group, consider everyone when choosing where to go.

1 point:

Stay as slow as the slowest person
Stay at the pace of the slowest member; do not hike too quickly to save energy

0 points:

Take care of others in the group
You need to be careful and pack lots of stuff
It's a great day out for the family.

Purpose: Informational **Process:** Interpret and integrate ideas and information

Full credit: Ireland: 16% PIRLS: 10% Irish Girls: 21% Irish Boys: 11%

At least partial credit: Ireland: 52% PIRLS: 38%

In general, correct responses were not very different from one another, probably because the information could be found in the text, and, unlike EPQ16_CR, the item did not invite creativity. Just 4% of pupils in Ireland omitted or failed to reach this item, compared with an international average of 9%. In Finland, 7% omitted this item. As with many of the items reviewed, a cluster of countries composed of Chinese Taipei, Hong Kong, the Netherlands, Singapore and the United States had lower levels of non-response than most other countries.

Gender differences on PIRLS test items

In this section, gender differences in PIRLS 2011 are examined in greater detail. First, gender differences in Ireland on overall performance and on the PIRLS reading purposes and processes are examined. Then, individual items on which there are large gender differences in Ireland are described.

Gender and performance on overall scale and on subscales

As noted at the beginning of this chapter, girls in Ireland achieved an average score that was 15 points higher than that of boys. Girls outperformed boys by a statistically significant margin in almost all participating countries. The five countries with mean overall scores significantly higher than Ireland's all had gender differences that were close to the international average gender gap of 17 points (ranging from 16 points in Northern Ireland and Hong Kong to 21 points in Finland).

In Ireland, girls outperformed boys by 22 points on Literary texts, and by just 8 points on Informational texts. The corresponding international differences in favour of girls were 20 points and 12 points respectively. Differences in the highest-scoring PIRLS countries on the Literary scale ranged from 26 points in Finland to 21 in the Russian Federation, with a difference of 23 in Northern Ireland. Differences on the Informational scale ranged from 14 in Finland to 8 in Hong Kong with a difference of 12 in Northern Ireland. In the US, the difference on the Literary scale was 10 points, while on the Informational scale, it was just 7 points.

In Ireland, there was an average difference of 13 points in favour of girls on the Retrieve/Infer scale, and a difference of 18 points on the Interpret/Evaluate scale. Internationally, the gap in favour of girls on Retrieve/Infer was 16 points and on Interpret/Evaluate it was 17. The gap in high-scoring countries on Retrieve/Infer ranged from 17 in the Russian Federation to 13 in Hong Kong, with a difference of 15 in Northern Ireland. Differences on Interpret/Evaluate ranged from 21 in Finland to 17 in Singapore.

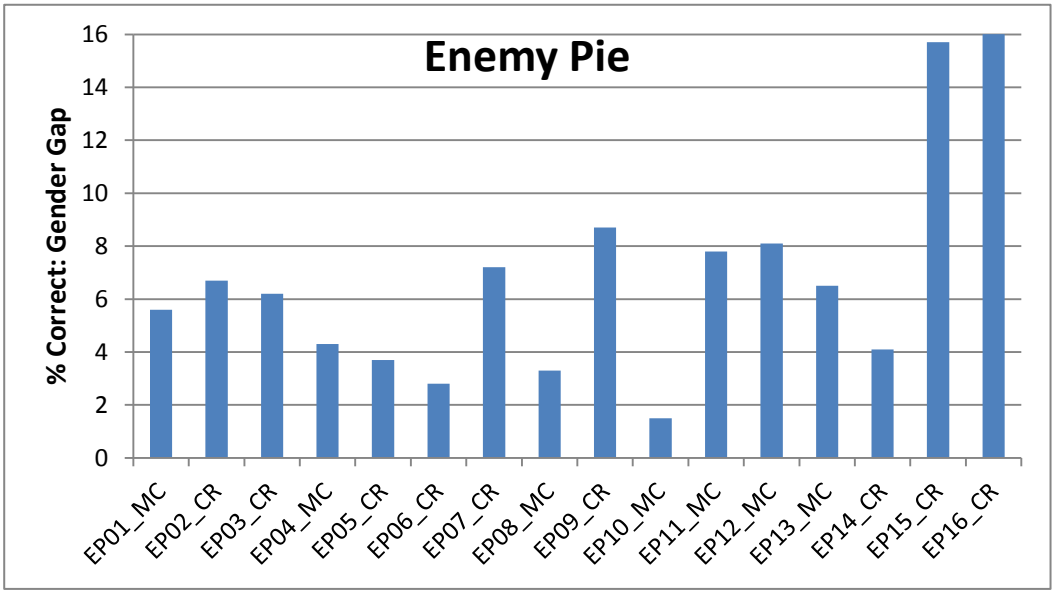
Gender differences on selected PIRLS items

In general, differences in favour of girls on individual PIRLS items were small. Figure 7.7 shows the differences for pupils in Ireland on items based on the *Enemy Pie* (Literary) text. For this text, which featured male characters only, all items showed a gender difference in favour of girls, with two showing a large difference (defined here as greater than 10%). These items (EP15_CR and EP16_CR) are both constructed-response items and are difficult in overall terms. Just 41% of Irish pupils achieved full credit on EP15_CR (69% received at least partial credit), and, as noted earlier, 45% achieved full credit on EP16_CR (no partial credit was available) (Figure 7.8).

Item EP15_MC asked pupils to identify the kind of person Tom's dad was, and to give an example from the story to show this. Forty-nine percent of girls and 33% of boys in Ireland achieved full credit (the corresponding international averages were 27% and 22%, indicating a smaller gender gap internationally). The question required higher-level thinking

(it contributed to the Interpret/Evaluate subscale) and also required an extended constructed-response answer as pupils had to justify the character trait they selected. The answer to the first part of the question (identification of a character trait) was not explicitly stated in the text, and had to be inferred.

Figure 7.7: Size of gender gap (all favouring girls) on items from *Enemy Pie*, Ireland only



For full/partial credit items, chart shows gender difference for full credit.

On EP16_CR (described earlier; the lesson that might be learned from the story), girls in Ireland had an average percent correct score of 55%, compared to 36% for boys. The corresponding international percentages were 34% and 28% respectively. Like EP15_CR, it contributed to the Interpret/Evaluate subscale, though, in general, a short (often single-sentence) response would have been appropriate.

Figure 7.8: Characteristics of selected PIRLS items with large gender differences (*Enemy Pie*)

Item ID: EP15_CR
What kind of person is Tom's dad? Give an example of what he did in the story that shows this.

_____

Scoring information: Score **2/1/0**. A plausible character trait that is central to his role in the story (e.g., helpful, caring, nice, good, smart, clever, tricky, secretive) **AND** sample action as evidence. A plausible character trait only for partial credit.

2 points:

He was caring because he wanted to help his son make friends.
He was smart in how he found a way for the boys to like each other

1 point:

He was a good dad.
He cared about his son.

Purpose: Literary **Process:** Interpret and integrate ideas and information

Full credit: Ireland: 41% PIRLS: 24% Irish Girls: 49% Irish Boys: 33%

At least partial credit: Ireland: 69% PIRLS: 54%

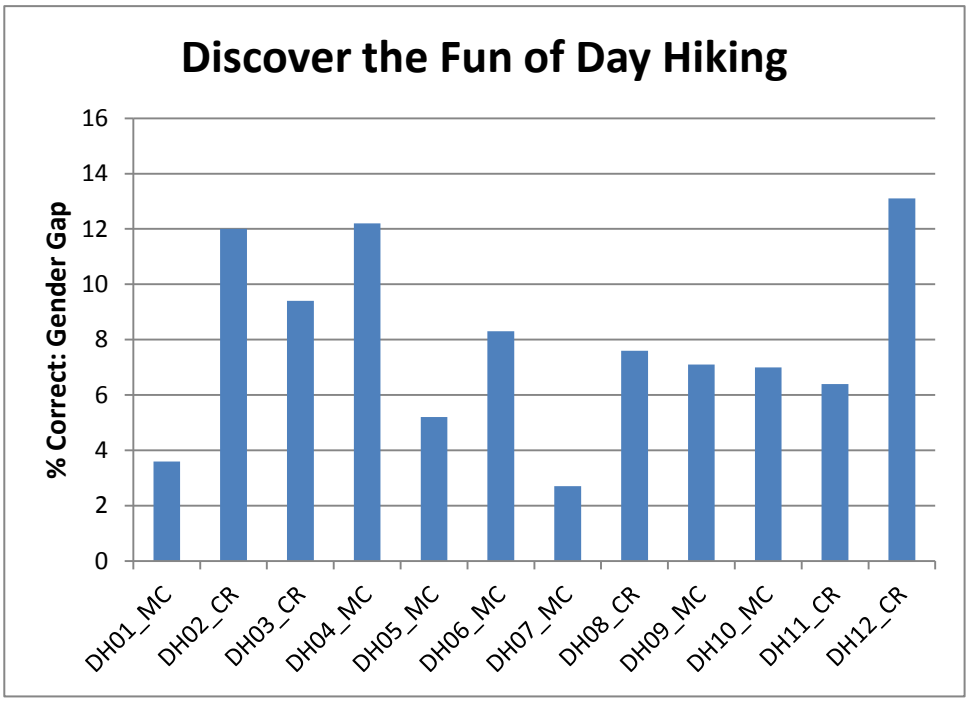
Item ID: EP16_CR
What lesson might you learn from this story?

See Figure 7.6 for more details.

There may be a number of reasons why these questions in particular show such large gender differences in Ireland. They involve a Literary text, require higher-level interpretation and evaluative reading skills, and they require pupils to demonstrate evidence of their understanding of the text in writing – all of which girls seem to do better on than boys.

Figure 7.9 summarises items based on the *Discover the Fun of Day Hiking* brochure (a text categorised as Informational). Three items had a gender difference in Ireland of at least 10%, while a further two had a difference of 8-10%.

Figure 7.9: Size of gender gap (all favouring girls) on items from *Discover the Fun of Day Hiking*, Ireland only



For full/partial credit items, chart shows gender difference for full credit.

DH02_CR – discussed earlier in Figure 7.4 – is a relatively easy constructed-response item. In Ireland, 74% of pupils provided a correct response, while internationally, 63% did so. In Ireland, 80% of girls and 68% of boys identified two interesting things the leaflet said you might do on a day out (no credit was given for identifying one or none). Internationally, 66% of girls and 60% of boys achieved full credit, a smaller gender difference than in Ireland. The item is unusual to the extent that girls in Ireland generally performed best on Literary items, especially those categorised as Interpret/Evaluate. This question is categorised as Informational and as Retrieve/Infer.

Item DH04_MC, described earlier in Figure 7.5, is an example of a multiple-choice item with a large gender difference. The question asked pupils to identify the section of the *Discover the Fun of Day Hiking* brochure that told them to wear the right clothes for the weather. Sixty-one percent of girls in Ireland, and 49% of boys, provided a correct response, roughly twice the size of the gap between the corresponding estimates internationally (59% and 53%, respectively). Like DH02_CR, the question is categorised as focus on and retrieve explicitly stated information and ideas, and contributes to the Retrieve/Infer scale. As noted earlier, 33% of pupils in Ireland selected an alternative option (Packing Checklist) to the specified correct answer, for which there was some support in the text, and boys were more likely than girls to do so, perhaps because they did not weigh the two competing responses in the same way as girls.

Item DH12_CR, another constructed-response item, asked pupils to identify a route on the map that they would choose and to provide two reasons from the text for doing so (Figure 7.10). In Ireland, 40% of pupils achieved full credit, and 71% achieved at least partial credit (i.e., they provided at least one reason), compared with 33% and 60% internationally. In Ireland, 47% of girls and 34% of boys achieved full credit, indicating a gender gap considerably larger than the 5% found internationally (35% and 30%, respectively). The question is categorised as interpret and integrate ideas and information, and contributes to the Integrate/Evaluate subscale.

Figure 7.10: Characteristics of selected PIRLS items with large gender differences (*Day Hiking*)

Item ID: DH02_CR
Give two interesting things the leaflet said you might see on a day hike

See Figure 7.4 for more details.

Item ID: DH04_MC
Which section of the leaflet told you to wear the right clothes for the weather?

See Figure 7.5 for more details.

Item ID: DH12_CR
Use the map of Lookout Hill and the map key to plan a hike. Check which route you would choose.
____Bird Walk
____Lookout Station
____Frog Creek
____Lookout Hill Circle
Give two reasons from the leaflet why you choose this route.

_____

Scoring information: Score **2/1/0:** Select route and give **two** appropriate reasons, drawn from text in the map key or features of the map. [Any route is acceptable, once appropriate reasons supplied]. Route and *one* reason only, for partial credit.

2 points: [sample answers for two routes.]
Frog Creek Trail. You can take a picnic lunch. You can stop and see the birds at the bird sanctuary on the way.
Lookout Station. I think it would have the best views and it is the most challenging hike.

1 point:
Bird Walk. It takes two hours. It is the shortest.

Purpose: Informational			**Process:** Interpret and integrate ideas and information	
Full credit:	Ireland: 40%	PIRLS: 33%	Irish Girls: 47%	Irish Boys: 34%
At least partial credit:	Ireland: 71%		PIRLS: 60%	

Although some PIRLS released items show differences in favour of boys, none reached 10%. However, one multiple-choice item based on the *Giant Tooth* text (about fossils and dinosaurs) came close with a difference – in Ireland – of 9% in favour of boys. *Giant Tooth* was also the only released text not to contain any items with a gender gap in excess of 10 points, perhaps partly because the text covers content stereotypically viewed as of interest to boys – fossils, lizards and dinosaurs. Of the 59 reading items released after PIRLS 2011, 19 were based on the *Giant Tooth* text. Ranked in order of gender difference, nine of the ten items on which boys did better compared to girls (internationally) were from *Giant Tooth*. Although not shown here, the text and items for *Giant Tooth* can be accessed at http://www.erc.ie/documents/pirls_2011_reading_items.pdf.

As well as responding to comprehension questions, pupils taking PIRLS 2011 indicated their liking for each of the passages they were asked to read. Table 7.5 summarises

the responses for girls and boys in Ireland and internationally. In Ireland, for *Giant Tooth*, 14% more boys than girls reported that they liked this text *a lot*. The corresponding international difference in favour of boys was 11%. It is notable that *Giant Tooth* was the only released passage that a substantially greater proportion of boys than girls reported enjoying *a lot*. It is also noteworthy that, for each of the released passages, fewer pupils in Ireland, whether boys or girls, reported enjoying the passage as much as pupils internationally.

Table 7.5: Percentages of girls and boys in Ireland and internationally reporting that they liked each released passage *a lot*

	Ireland		PIRLS	
	Girls	Boys	Girls	Boys
Enemy Pie	59	42	71	58
Day Hiking	40	33	56	51
Fly, Eagle, Fly	52	54	60	61
Giant Tooth	33	48	47	58

In summary, across released items in PIRLS, those items which show the largest gender differences tend to be those categorised as difficult (i.e., they are at the Advanced International Benchmark) (Table 7.6). They also tend to require a constructed-response that may include more than one part, and, more often than not, require pupils to engage in higher level reading comprehension processes (Integrate/Evaluate). Whereas, overall on PIRLS, the gender difference in favour of girls was greater for questions based on Literary than on Informational texts, equal numbers of items on which girls significantly outperformed boys were found on Literary and Informational texts across the released texts and items.

Table 7.6: Summary characteristics of PIRLS 2011 released items with gender differences in performance of at least 10%

	Item type*		Benchmark Level		Purpose		Process	
Text (no. items)	CR	MC	Advanced	Low	Literary	Info.	Ret/Inf	Int/Eval
Enemy Pie (2)	2	0	2	0	2	0	0	2
Day Hiking (3)	2	1	1	2	0	3	2	1
Fly, Eagle, Fly (1)	1	0	1	0	1	0	0	1
Total (6)	5	1	4	2	3	3	2	4

*Constructed-response (CR) and multiple-choice (MC).

Conclusions

In PIRLS 2011, pupils in Fourth class in Ireland ranked 10th of 45 participating countries, with a mean score of 552. Just five countries achieved mean scores that were significantly higher than Ireland's. While 24% of pupils in Singapore performed at the Advanced International Benchmark in PIRLS, compared with 16% in Ireland, no other country had a significantly higher percentage of pupils at this Benchmark than Ireland. Therefore, in overall terms, Irish pupils did well in PIRLS, though there is room for improvement. Perhaps some of this will be achieved through the actions outlined in *Literacy and Numeracy for Learning and Life* (DES, 2011).

In general, frameworks for both curriculum and assessment in Ireland are compatible with the PIRLS assessment framework. This compatibility is evident in the definition of reading literacy in PIRLS and in the National Assessments, with both focusing on reading as a constructive process, on the social aspects of learning to read, and on children's use of

reading to gain information and for enjoyment. The definition of literacy in the recent national strategy is somewhat broader, in that it refers to oral language and writing as well as reading, and refers to understanding of digital texts as well as print texts.

Both of the reading purposes in PIRLS (Literary, Informational) are covered in the PSEC, although, in Ireland, classroom libraries and textbooks for English tend to favour narrative texts. Similarly, while many of the comprehension skills in PSEC fall under the PIRLS categories of Retrieve/Infer and Integrate/Evaluate, the emphasis on Integrate/Evaluate is relatively weak before Third/Fourth classes.

An analysis of PIRLS 2011 items released in December 2012 revealed that pupils in Ireland did quite well, relative to pupils in other high-performing countries. In general, pupils in Ireland scored at about the same level or a little lower than their counterparts in the countries with the highest overall scores. While strong conclusions cannot be arrived at based on the performance of pupils in Ireland on a subset of released items, some broad patterns are suggested:

- Items at the PIRLS Low and Intermediate Benchmarks were generally easy for pupils in most PIRLS countries. However, such items were particularly easy for pupils in Ireland and other high-scoring countries, with three-quarters of pupils or more providing correct responses at these Benchmarks.
- Items at the High and Advanced Benchmarks were more challenging, with under half of pupils in Ireland responding correctly to some items at the Advanced Benchmark.
- Items requiring extended constructed (written) responses were more challenging than items presented in a multiple-choice format. This finding was not unique to Ireland.
- Items that required pupils in Ireland and internationally to engage in higher-level thinking (Interpret/Evaluate) were more challenging than those requiring pupils to engage in more basic thinking (Retrieve/Infer). In part, this may have been driven by the use of constructed-response items to assess higher-order thinking.
- Surprisingly, pupils in Ireland struggled with items that asked them to identify, and provide support in respect of, traits of a leading character. Irish pupils also struggled to articulate in writing the lesson they had learned from a story. Pupils would have been expected to be familiar with these important narrative reading skills, based on the PSEC.

These data confirm that, while overall comprehension levels in Ireland are high relative to most other countries, there is room for improvement, especially on items that ask pupils to interpret or evaluate, and on those that invite a written response (sometimes the same items). Among the instructional strategies that could be emphasised more in curriculum and in instruction, and that might lead to further improvement among pupils in Ireland, especially on higher-level reading skills, are:

- An increased emphasis on oral language in English lessons, including a stronger emphasis on vocabulary development and a more focused use of discussion to build reading comprehension skills (e.g., Almasi & Keligaras-York, 2009).
- An increased emphasis on developing literacy skills throughout the curriculum as well as in English classes (e.g., Shanahan, 2009).
- A focus on teaching higher-order reading comprehension strategies such as inferencing, visualising, creating mental imagery, generalisation and summarisation (Wharton-McDonald & Swiger, 2009).

- A focus on developing pupils' metacognitive reading strategies so that pupils can assess their own comprehension and apply fix-up strategies if comprehension breaks down (e.g., Massey, 2009).
- The establishment of stronger links between reading and writing, with writing used on a regular basis to evaluate ideas encountered in reading texts (e.g., Kennedy et al., 2012).

Girls in Ireland outperformed boys on the overall PIRLS reading scale, and on most of the released items. In general, girls appear to have a noticeable advantage in answering questions about Literary tests, in responding to Integrate/Evaluate items, and in responding to items requiring a written response.

Although girls outperformed boys on the vast majority of the released items, large differences, defined as 10% or greater (all in favour of girls) were identified on just six of these items. Nevertheless, the accumulation of relatively small differences in favour of girls on the vast majority of items leads to a robust overall difference in favour of girls. Although, overall, girls in Ireland outperformed boys by a greater amount on the Literary subscale compared with the Information subscale, equivalent numbers of released items with large gender differences in favour of girls were categorised as Literary and Informational.

PIRLS suggests that boys prefer to read informational texts such as *Giant Tooth* rather than literary texts like *Enemy Pie* and that they have somewhat greater understanding of informational texts. Such texts can, perhaps, provide a route into reading for some boys, if, as suggested elsewhere (DES, 2011; Eivers et al., 2010), greater use of informational texts is made in Irish classrooms. Similarly, increased used of digital texts in classrooms could encourage boys to engage in more reading (Perkins, Moran, Shiel, & Cosgrove, 2011). There may also be value in directing the attention of pupils (both boys and girls) to the ways in which gender is constructed socially, both in and out of school, how this impacts on pupils' own lives and is endorsed by others, and how gender is portrayed in texts.

Additional references

This section does not repeat the core references already listed in Chapter 1. These include the three international reports on PT 2011 and the Irish national report and those related to other key studies such as National Assessments and PISA.

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