

Grade 5

Assignment Bundle

Name: _____ Class: _____

Gren's Ghost

By Marie-Louise Fitzpatrick
2015

Marie-Louise Fitzpatrick (born 1962) is an Irish writer and illustrator best known for her children's picture books. In this short story, a boy meets one of his classmates at a castle, not knowing what waits for him. As you read, take notes on the speaker's emotions throughout the story.

[1] I'm climbing out the window. It's midnight. I step carefully into the flower patch beneath my bedroom window and shine the torch around my feet to avoid damaging my dad's prize-winning gladioli.¹ I lower the window, balancing it carefully on my school ruler so it doesn't close completely. I mustn't get locked out. Ringing the doorbell when I get back is not an option. My mother would never recover from the shock of knowing her one and only son has been wandering the neighbourhood in the middle of the night. My parents think I'm good-as-gold. And usually I am. But tonight I'm climbing out.



"My family's castle remains" by Tim Deegan is licensed under CC BY 2.0

When Gren Harrington took me aside in school today and asked me to meet him at the Seven Castles carpark at ten minutes past midnight, I should have said no. But I said yes. Because that's what everyone says to Gren Harrington. I've often watched him from my corner of the classroom and tried to figure out why. I think he may have charisma. I've read the definition — magnetic charm or appeal — and, yup, it fits. I guess that's why when he came up to me in the corridor today and said, 'So, Flynn, the other boys have you down as a bit of a wet blanket but I'm thinking there's more to you than meets the eye. Am I right?' I found myself wanting to nod. But I wasn't at all sure that there was. More to me. Than meets the eye. So I tried a non-committal shrug.

He said, 'I have this thing I want to do but I'll need some help pulling it off. I figure you're my man. What do you say?'

I thought: *What thing? When? Where? What will I have to do? Will it hurt?* I said, 'Sure.'

[5] 'Great,' he said. 'You live in Kells, right?'

I nodded.

'I live a mile outside,' he said. As if I wouldn't know that; we travel on the same school bus every day.

'The Seven Castles,' he said. 'You know the visitors' carpark?'

1. a type of flower also known as a "sword lily"

I nodded again.

- [10] 'I'll see you there,' he said. 'Tonight, ten after midnight. Bring a torch.' He drew his fingers across his lips in a zipping motion and grinned at me before walking away to join his friends. That grin said he knew I'd be there, he knew I wouldn't bottle out.²

And even though I've been scared stupid all evening I've never once considered not going. It's only now, as I arrive at the carpark still breathless from stumbling across the fields by torchlight, that it occurs to me this could be some sort of ambush. Maybe there'll be a whole gang of boys waiting for me. Maybe I've been chosen as the victim in some initiation thing where they take turns beating me to a pulp. I stop dead in the lane outside the carpark. Are you mad or what? I ask myself.

A hand closes on my arm.

'Get off the road, will you?' Gren Harrington shines his torch in my face and pulls me after him through the gate into the empty parking lot.

'Why are we here?' I ask. I can hardly hear my voice over the roar of blood rushing through my ears. I probably sound as freaked out as I am.

- [15] 'You'll see,' is all he says. He indicates the ruins in the field below us with his head. 'Come on.'

We cross the tarmac and pass through the stile³ into the field. I can see cow shapes standing around in the darkness; I suppose they are asleep. I should be asleep. *I should be at home, in my bed, asleep.* The big walls that surround the ruins grow blacker as we near them. The square towers along the walls seem to challenge us: *Come inside if you dare.*

'They're not castles,' I say. 'They're watch towers, meant for defence. We call it the Seven Castles but it's actually a walled priory.'⁴ I'm gabbling,⁵ doing my Finbar Swot-face⁶ Flynn thing. That's what the boys in school call me — Finbar Swot-face Flynn. *Cut the history lecture, Swot-face,* I tell myself. But I'm afraid if I stop talking my knees will turn to jelly and I'll collapse on the grass. 'You probably know all this stuff already,' I say.

'Not all of it,' Gren says. There's no sarcasm in his voice and there's no menace⁷ in his smile, but I know he's a good actor — I've seen him lie to a teacher without so much as breaking a sweat. One smile doesn't mean our entire class isn't hiding behind those walls, waiting for me.

The ground dips steeply; I try to concentrate on minding my step. Any minute we'll pass under the entrance arch. If someone's lying in wait, this is where they'll be. I want to turn and run; instead I speed up. Whatever it is I've stupidly walked myself into, I have to get on with it. I rush right in, swinging my torch around. Nothing but stones: broken walls, arches, the outlines of what were once churches, buildings and rooms. I stand in the centre of it all, taking deep breaths, giddy⁸ with relief.

-
2. to decide not to do something you committed to
 3. a set of steps for passing over a fence or wall
 4. a religious house
 5. to talk quickly and foolishly
 6. "Swot" refers to someone who is studious.
 7. **Menace (noun):** a person or thing that is likely to cause harm
 8. **Giddy (adjective):** light-hearted

[20] 'Got to hand it to you, man,' Gren says, coming up behind me. 'I find this place creepy. You marched in here like it's the middle of the day.'

He taps my backpack. 'What have you got there?' he asks.

'Just some things I thought might come in handy,' I say.

He jerks the backpack off my shoulders, tests the weight of it, puts it down.

'Let's see what you've got,' he says.

[25] I filled the backpack in my bedroom while I waited for midnight to come. My plan was this: in the event of an emergency, I coolly reach into my bag and take out just what we need; if nothing happens, it all stays in the bag. I packed extra batteries for the torch, a blanket, some rope, chocolate (two large bars), biscuits (Figrolls), a map of the site from the Seven Castles' website. I considered a flask of soup but the logistical problems of organising it without arousing⁹ the suspicions of my parents were too complex, instead I brought Cup-a-Soups, an old saucepan, water, sticks and matches. Now I notice Gren has a backpack too. Of course he has. He'll have brought everything he needs for whatever this thing is he wants us to do. I feel my face flush pink as I take all the stuff out of my bag.

'We won't starve then,' Gren says. And winks.

He reaches into his backpack. He pulls out a camera and a load of dark material which I mistake for a blanket until he shakes it out. It's a monk's robe, brown, with a hood.

'Rented,' he says. 'Pascal's Party Shop, Kilkenny. Cost me thirty euros.¹⁰ But it'll be worth it, to see their faces.'

'Whose faces?' I ask. I can't stop myself glancing over my shoulder.

[30] '6A,' he says. 'That mob of muppets you and me are privileged to call our classmates. Tomorrow I plan to go in and tell them a story, one in which I have spent the night alone in the Seven Castles and caught a peek of the famous Priory Ghost.'

'There's a ghost?' I say, glancing around again. 'I've never heard of a ghost.'

'Sure you have,' Gren says. He slings the robes at me. He waves the camera in my face. 'He's appearing tonight and I'll have proof.'

'They'll say you Photoshopped it,' I say.

'It's a Polaroid camera,' he says. 'Which means instant prints.' He points to the slot where the photos come out. 'Can't mess with them. And even if they have their doubts, I'll still go down in school history as the boy who spent the night alone in the Seven Castles.'

[35] 'You're not alone,' I say.

9. **Arouse (verb):** to awaken a feeling, emotion, or response

10. a coin or bill used in European countries

'Ah, but I am,' he says. 'Tonight you're not Finbar Flynn, you're the Priory Ghost.'

'But then,' I say, 'no one will ever know ...'

'You were here?' Gren says. 'I'll know.' He looks at me questioningly, like he hopes that will be enough.

It is. I nod.

- [40] 'I looked around the class to pick me the perfect partner for this adventure, and there you were,' he says. 'Let's sort the photos first.'

As I pull on the monk costume, Gren suggests I use my rope to tie it around the middle because the cord that came with it looks pathetic. He checks my maps for the most authentic¹¹ place for a ghost monk to walk. We find the perfect spot. We set up the torches to provide atmospheric shadows. I walk, Gren clicks. Photo after photo slides out of the camera. We line them up and reveal them all at once, peeling off the backing paper, groaning and hooting as we see what we've got. Most of them are useless but two look convincingly spooky.

'Score,' says Gren, and punches the air.

'Score,' I say.

The perfect partner for this adventure is me, I think.

- [45] We make a small fire with my sticks and heat the water in the pan, but we take it off too early and the soup is lukewarm-lumpy. We eat it anyway, me in the monk robes and Gren wrapped up in the blanket I brought. We talk, talk, munch, munch, words and biscuits and chocolate in the glow of the firelight.

'You know what I think?' Gren says, thumping his head like he's had a sudden brainwave. 'You need to drop the bar.'

'Huh?'

'The bar. Secondary school will be three kinds of hell with a name like Fin-bar. Finn Flynn. Now that's a cool name.'

I consider this. 'But how...'

- [50] 'Just start using it. Like you mean it. Write it on your schoolbooks and your copybooks. Next time someone asks your name, you'll say ...' He leaves the sentence dangling and stares at me expectantly.

'F-finn,' I say.

'Again,' he says.

'Finn,' I say. 'Finn Flynn.'

11. **Authentic (adjective):** genuine; real

'Again,' he says, raising his voice.

[55] 'Finn Flynn,' I say, raising mine.

'Again,' he shouts.

'Finn Flynn,' I yell.

Gren jumps to his feet and I scramble to mine.

'Finn Flynn, Finn Flynn, Finn Flynn, Finn Flynn,' Gren chants, and he leads me around the fire, stamping his feet and waving his arms.

[60] 'Finbar Flynn is dead and gone, long live Finn Flynn,' he roars.

The words bounce around the fractured¹² walls: 'Finn, Flynn, Finn, Flynn, inn-inn-in.' We laugh at the echoes, we laugh at our dancing shadows, we laugh at everything-nothing till tears roll down our cheeks and our bellies hurt.

'Gren's a really cool name,' I say when we're done.

'A lot cooler than what it's short for,' he says.

I stop and search about my head, adding endings to his name, trying for a likely match. No. Gren couldn't be short for —

[65] 'We need to get gone,' Gren says, handing me my blanket. 'The sun is coming up.'

He's right. The walls of the priory are turning pinky-grey. He kicks dirt over the ashes of our little fire and I gather up my stuff.

'Thanks for having the guts to come tonight, Finn,' Gren says. 'You must have wondered what you were getting yourself into. Fair play, man.'

We don't say much as we pass the cow shapes and go through the carpark. In the lane he thumps my arm in salute, sets off at a run; then he's gone.

*Does this make us mates*¹³ I wonder, as I cross the fields towards home, but I know it doesn't. When he shows the ghost photos to the other boys they'll look around to see who his accomplice¹⁴ was and it'd give the game away if he's suddenly talking to me. He never has before.

* * *

12. **Fractured** (*adjective*): broken, cracked

13. friends

14. **Accomplice** (*noun*): a person who helps another person in a crime or wrongdoing

[70] The ruler is where I left it. I tilt it slightly, get my fingers underneath the frame and lift the sash.¹⁵ I climb back into my bedroom. Everything is just as it was when I left. I'll go into school later and no one will know that Finbar Swot-face Flynn is not a wet blanket. Nobody but Gren.

And me. I'll know. I know.

Finbar Flynn is dead and gone. Long live Finn Flynn.

©Marie-louise Fitzpatrick
First published in Once Upon a Place, a collection of stories and poems by Irish authors compiled by Eoin Colfer during his tenure as Laureate na nÓg, published by Little Island Books. Available in the US from Trafalgar Square Publishing.

15. a frame holding the glass in a window

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. Which statement expresses the main theme of the short story?
 - A. Friends can help us realize who we really want to be.
 - B. It's important not to judge people based on your first impression of them.
 - C. Children can be cruel to their classmates without realizing it.
 - D. Changing who you are can help you be more accepted by others.

2. PART A: What emotions are emphasized through the author's use of first-person point of view?
 - A. Finn's desire to become part of Gren's social circle at school.
 - B. Finn's uncertainty about Gren and why he asks him to meet up.
 - C. Finn's relief that he has a friend in Gren when he returns to school.
 - D. Finn's sadness that he won't get to share what happened at the castle.

3. PART B: Which section from the text best supports the answer to Part A?
 - A. "I'm gabbling, doing my Finbar Swot-face Flynn thing. That's what the boys in school call me — Finbar Swot-face Flynn." (Paragraph 17)
 - B. "There's no sarcasm in his voice and there's no menace in his smile, but I know he's a good actor — I've seen him lie to a teacher without so much as breaking a sweat." (Paragraph 18)
 - C. "We laugh at the echoes, we laugh at our dancing shadows, we laugh at everything-nothing till tears roll down our cheeks and our bellies hurt." (Paragraph 61)
 - D. "Does this make us mates I wonder, as I cross the fields towards home, but I know it doesn't." (Paragraph 69)

4. How do Finn's feelings about Gren change throughout the story?
 - A. Finn views Gren as a rival at school in the beginning of the story but eventually views him as a friend.
 - B. Finn is intimidated by Gren in the beginning of the story and decides to change who he is to be tough like Gren at the end.
 - C. Finn views Gren as a friend in the beginning of the story, but eventually realizes Gren won't be friends with him publically.
 - D. Finn questions Gren's intentions in the beginning of the story but comes to realize how much fun he can have with Gren.

5. How does the following section contribute to the plot of the story?: "Gren's a really cool name,' I say when we're done. / 'A lot cooler than what it's short for,' he says." (Paragraphs 62-63).
- A. It develops the relationship between characters and suggests that Gren and Finn have more in common than Finn realized.
 - B. It reveals the main conflict of the story by showing that Gren was teased for his full name in school.
 - C. It shows that the conflict will continue because Gren feels insecure about his shortened name.
 - D. It reveals a surprise resolution to the main conflict by showing how much Finn enjoys Gren's company and friendship.

6. How does the speaker's new name contribute to the theme of the story?

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. What does it mean to the speaker to change his name from Finbar to Finn? Do you think by changing his name, he is changing who he is? Why or why not? What does your name mean to you? Do you think it is an important part of your identity?
2. In the story, Finn doesn't think his adventure with Gren makes them "mates". Do you consider Finn and Gren friends, even if they don't acknowledge it at school? Describe one of your friendships and how it is similar to or different from Finn and Gren's relationship.

Name: _____ Class: _____

Soccer Speaks Many Languages

By Dianna Geers
2008

Innocent Ndayizeye is a refugee, meaning that he was forced to leave his home country because it was no longer safe to live there. In this informational text, Dianna Geers discusses Innocent's love for playing soccer while living in a refugee camp and after he relocates to America. As you read, take notes on how soccer helped Innocent make friends, no matter where he was.

- [1] Innocent Ndayizeye scrunched an old plastic bag into a tiny clump, tied it with string, and stuffed it into another plastic bag. He continued doing this until the crumpled bags became large enough to be the ball for a football¹ game with his friends. For goalposts, the boys took off their shirts and laid them on the parched land.



"Playing football" by Oxfam East Africa is licensed under CC BY-NC 2.0

A Sport for Everyone

Innocent and his friends lived in the Mkugwa refugee camp in Tanzania.² The children formed football teams, had competitions, and played at every chance.

The refugee families in the camp were separated based on ethnicity³ — the Tutsis in one section, the Hutus in another, and the families with both Tutsis and Hutus in their own section. This was because the Tutsis and Hutus were fighting each other in a civil war. Despite this, all of the children played together.

"We didn't worry if the other kids were Tutsis or Hutus," recalls Innocent. "We just thought of them as our friends." Playing football gave all the children a common bond.

Life in a Refugee Camp

- [5] Refugee camps such as Mkugwa exist around the world. They are places where groups of people live when their homeland is unsafe because of natural disaster, famine,⁴ or war. When people flee their country to escape persecution⁵ or violence, they are called refugees. International laws protect them.

1. The author is referring to soccer, as soccer is called football in many other parts of the world.
2. an East African country
3. **Ethnicity (noun):** a state of belonging to a group that has a common national or cultural tradition
4. **Famine (noun):** extreme shortage of food
5. **Persecution (noun):** cruel or unfair treatment, especially because of race or political or religious beliefs

When Innocent was four years old, he and his family left their home country of Burundi.⁶ The civil war had made it too dangerous to stay there. They walked until they reached the Mkugwa refugee camp. Innocent's dad built a two-room house for his family out of mud and sticks that they gathered.

Since Innocent's family had left many of their belongings behind, they needed food and clothing. People from around the world donated these items to the refugee camp. If it weren't for such help from others, "I would probably not be alive today," Innocent says.

Innocent's parents lined up once a month to receive food and clothing for the family. They cooked their food on a wood fire outside of their house. Most of the time, all they had was rice.

While living in the camp, Innocent's dad fixed radios and helped build mud homes for other refugees. Innocent's mother worked as a nurse, helping to care for the sick. Innocent went to school in the camp. His favorite part was recess, when he would play football.

Moving to America

- [10] After five years of living in the refugee camp, Innocent's family moved to the United States with the help of a charitable organization. When they reached the United States, Innocent's family went first to Kentucky and then to Iowa.

Everyone in Innocent's family spoke Kirundi and French, but not English. A church group was helping them, and a few of its members began to teach them English. They also helped Innocent's family set up an apartment, buy groceries, and enroll the children in school.

Friendship Through Soccer

Innocent was nine when he began school in Cedar Rapids, Iowa. He knew none of the other kids, and he didn't speak the language of his classmates very well. At recess, though, there was something he understood. Kids played his favorite game, but in the United States they called it soccer instead of football. Through soccer, Innocent made friends. They helped him learn English words and American games. Innocent found that people everywhere can be friendly and helpful. It didn't matter if they spoke a different language or were from a different place.

A Bright Future

Over the years, Innocent's family has adjusted to life in America. Now an American citizen and a freshman at Iowa State University, Innocent gets good grades and speaks English fluently.⁷ He earned a scholarship,⁸ and he is majoring in construction engineering so that he can learn to build houses, as his father did. He plays American football, basketball, and — you guessed it — soccer.

6. a country in East Africa that suffered a civil war from 1993 to 2006

7. able to speak or write easily

8. a payment made to support a student's education

Innocent has played soccer for as long as he can remember, and it has helped him in many ways. The game brought him together with children from different backgrounds while he lived in a refugee camp. It helped him feel at home when he was a new arrival in America. And through the opportunities it has created for him, it is helping him to fulfill his dreams.

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Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which statement identifies the central idea of the text?
 - A. Playing sports can help people develop necessary life skills.
 - B. No matter where you go in the world, all sports are the same.
 - C. Sports can bring people together, despite all of their differences.
 - D. Remaining physically active is important to being happy and healthy.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "Innocent Ndayizeye scrunched an old plastic bag into a tiny clump, tied it with string, and stuffed it into another plastic bag." (Paragraph 1)
 - B. "Innocent went to school in the camp. His favorite part was recess, when he would play football." (Paragraph 9)
 - C. "Through soccer, Innocent made friends. They helped him learn English words and American games. Innocent found that people everywhere can be friendly and helpful." (Paragraph 12)
 - D. "And through the opportunities it has created for him, it is helping him to fulfill his dreams." (Paragraph 14)

3. PART A: Which of the following describes the kids at the Mkugwa refugee camp?
 - A. They are accepting and supportive of one another.
 - B. They are discouraged from their experiences as refugees.
 - C. They are cold and exclusive towards one another.
 - D. They are unable to relax and have fun like other kids.

4. PART B: Which quote from the text best supports the answer to Part A?
 - A. "He continued doing this until the crumpled bags became large enough to be the ball for a football game with his friends." (Paragraph 1)
 - B. "The children formed football teams, had competitions, and played at every chance." (Paragraph 2)
 - C. "The refugee families in the camp were separated based on ethnicity — the Tutsis in one section, the Hutus in another" (Paragraph 3)
 - D. "'We didn't worry if the other kids were Tutsis or Hutus,' recalls Innocent. 'We just thought of them as our friends.'" (Paragraph 4)

5. What is the relationship between Innocent's love for soccer and his later success in America?

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Innocent didn't care who his teammates were or where they were from when he played soccer. Have you ever had the opportunity to work with people who are different than you are? What was it like to work with people from different backgrounds or with different opinions?
2. How do you think Innocent was able to make friends at the refugee camp and in America, despite the differences between him and the other kids? Do you think there are some things that people need to have in common, in order to be good friends? Why or why not?
3. How was soccer an important part of maintaining peace and happiness in Innocent's life? Do you think sports could help bring peace in other situations? If so, how?
4. Innocent encountered many obstacles as a refugee and moving to a new country. How do you think playing soccer helped him overcome these obstacles? What is something that has helped you get through difficult times?

Selecting Books for Your Child: Finding 'Just Right' Books

By: Kathleen Rogers

How can parents help their children find books that are not "too hard" and not "too easy" but instead are "just right"? Here's some advice.

Five finger rule

1. Choose a book that you think you will enjoy.
2. Read the second page.
3. Hold up a finger for each word you are not sure of, or do not know.
4. If there are five or more words you did not know, you should choose an easier book.
5. Still think it may not be too difficult? Use the five finger rule on two more pages.

Choose a book that is a good fit for you!

Read two or three pages and ask yourself these questions:

Will it be an easy, fun book to read?

- Do I understand what I am reading?
- Do I know almost every word?
- When I read it aloud, can I read it smoothly?
- Do I think the topic will interest me?

If most of your answers were "yes", this will be an easy book to read independently by yourself.

Will this book be too hard for me?

- Are there five or more words on a page that I don't know, or am unsure of?
- Is this book confusing and hard to understand by myself?
- When I read it aloud, does it sound choppy and slow?

If most of your answers were "yes," this book is too hard. You should wait awhile before you read this book. Give the book another try later, or ask an adult to read the book to you.

Tips on reading with your child

- When they can't read the word, say...
- Can you sound it out?
- Fingertap it.
- Can you think of the word or movement that helps you remember that vowel sound?
- What is the first and last sound? What word would make sense?
- Does it have a pattern that you have seen in other words? (ex-an, ack)
- How does the word begin?
- You said _____. Does that make sense?
- What word would make sense that would start with these sounds?
- Put your finger under the word as you say it.

When they want to read a book that is too hard, say...

- Let's read it together.
- This is a book you will enjoy more if you save it until you are older — or later in the year.
- [Be honest!] When people read books that are too hard for them, they often skip important parts. You will have more fun with this book if you wait until you can read it easily.

Rogers, K. (2008). Selecting Books for Your Child: Finding 'Just Right' Books. Retrieved November 7, 2008, from www.readingtogether.org.

HERE'S THE IMPACT OF READING 20 MINUTES PER DAY!

A student who reads

20:00

minutes per day

will be exposed to
1.8 MILLION
words per year
and scores in
90th PERCENTILE
on standardized tests

A student who reads

5:00

minutes per day

will be exposed to
282,000
words per year
and scores in
50th PERCENTILE
on standardized tests

A student who reads

1:00

minute per day

will be exposed to
8,000
words per year
and scores in
10th PERCENTILE
on standardized tests

Source: Nagy, Anderson and Herman, 1987

Home Reading Log

Student Information

Student Name		Grade Level	
School Name		Teacher	

Log

[illegible]

Same Volume, Different Shape

What You Need

- Recording Sheet

✓ Check Understanding

Describe three different arrangements of unit cubes for a prism with a volume of 24 cubic units. Sketch each prism.

What You Do

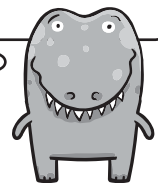
1. Take turns. Look at the *Prism 1* column on the **Recording Sheet**.
2. Choose a prism and tell its volume. Explain why you think this volume is correct.
3. If your partner agrees, write the volume in the *Volume* column on the **Recording Sheet**.
4. In the *Prism 2* column, sketch another prism (in pencil) with different dimensions that has the same volume. Tell its volume and why you think the volume is correct.
5. Your partner checks your work. Make changes if needed.
6. Continue until the **Recording Sheet** is complete.

I built a rectangular prism that has 3 rows of 6 unit cubes, and 2 layers:

$$(3 \times 6) \times 2 = 36$$

To build a different prism with the same volume, I can:

- Change the order of the factors: $(2 \times 3) \times 6 = 36$
- Use other factors of 36:
1, 2, 3, 4, 6, 9, 16, 18, 36
 $(2 \times 2) \times 9 = 36$

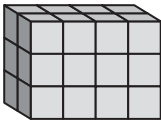
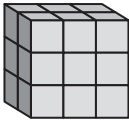
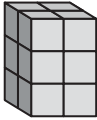
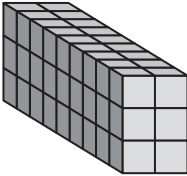
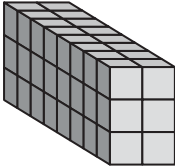
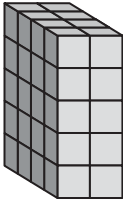


Go Further!

Show all the ways you can think of to represent a rectangular prism with a volume of 21 cubic feet. Exchange papers with your partner to check each other's answers.



Same Volume, Different Shape

Prism 1	Volume (cubic units)	Prism 2
	_____	
	_____	
	_____	
	_____	
	_____	
	_____	



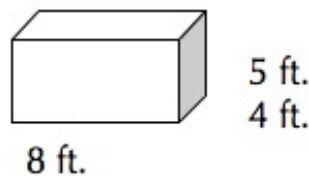
5.MD Cari's Aquarium

Alignments to Content Standards: 5.MD.C.5.b

Task

Cari is the lead architect for the city's new aquarium. All of the tanks in the aquarium will be rectangular prisms where the side lengths are whole numbers.

- a. Cari's first tank is 4 feet wide, 8 feet long and 5 feet high. How many cubic feet of water can her tank hold?



- b. Cari knows that a certain species of fish needs at least 240 cubic feet of water in their tank. Create 3 separate tanks that hold exactly 240 cubic feet of water. (*Ex: She could design a tank that is 10 feet wide, 4 feet long and 6 feet in height.*)
- c. In the back of the aquarium, Cari realizes that the ceiling is only 10 feet high. She needs to create a tank that can hold exactly 100 cubic feet of water. Name one way that she could build a tank that is not taller than 10 feet.

IM Commentary

This task supports the standard 5.MD.5.b in that it asks students to use the volume formula and conceptual understanding to solve real-world problems. Please note, the standard calls for students to find the volume, but not necessarily a missing length.

Find the Prism

What You Need

- unit cubes
- 6 game markers in one color
- 6 game markers in a different color
- Game Board

Check Understanding

A rectangular prism is measured in inches. The expression $(4 \times 4) \times 5$ represents its volume. Use unit cubes to build the prism. Tell its volume and explain how you got your answer.

What You Do

1. Takes turns. Choose a letter.
2. Read the expression next to that letter in the table. Evaluate the expression.
3. Find a prism on the **Game Board** with the same volume as your answer to number 2.
4. Your partner builds the prism with unit cubes to check your work.
5. If you are correct, cover that prism with your game marker. If you are incorrect, your partner covers that prism with his or her game marker.
6. Each partner takes four turns. The player with the greater number of game markers wins.

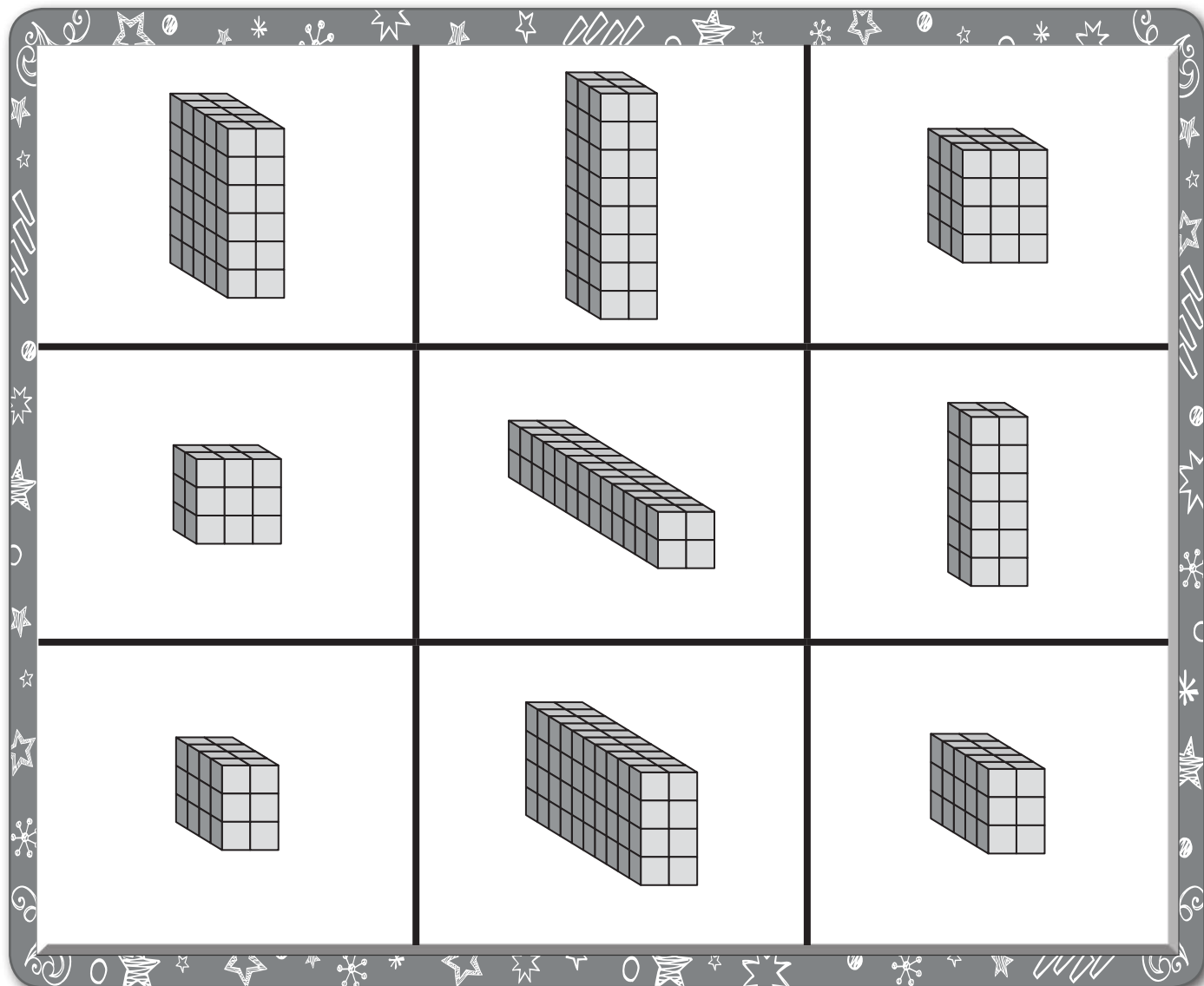
A	20×4
B	$10 + 10 + 10$
C	$(3 \times 2) \times 8$
D	$6 + 6 + 6$
E	$(2 \times 2) \times 6$
F	10×6
G	$12 + 12 + 12$
H	$(13 \times 2) \times 2$
I	8×3

Go Further!

Find the prism on the **Game Board** that is not covered with a game marker. Use unit cubes to build the prism. If each unit cube represents 1 cubic centimeter, what is the volume of the prism? Write two different expressions that show how to find that volume.

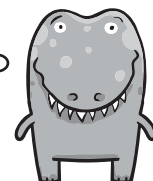


Find the Prism



Think! Does the expression represent:

- adding the number of cubes in each layer?
- multiplying the number of rows by cubes per row by number of layers?
- multiplying the number of cubes per layer by the number of layers?



Experiential Learning – Science

Grade 5

Assignment #1

- A. List of Objects you see

What did you use to see the objects?

- B. Turn the lights off and describe what you can see. Was it easier or harder to see the objects when the lights were turned off? What do you think made it harder to see the objects?
- C. Find a lamp in your house. Turn it on.
- a. Can you see the light from the lamp standing in different places near the lamp? Predict why you can see the light when standing in different places.
 - b. Find a book at least 8 x 10 inches. As you stand near the lamp, put the book in front of your face. Can you see the light source? Why or why not?
- D. Draw a model (in your notebooks or the space below) that shows how you were able to see objects when the light was on. Use the evidence from the activities with the lights off and the lamp to help you draw the model. Label the objects in your model. Explain your model in writing.

Assignment #2

A. Read the article Light Bounces

Light Bounces

Take a look around. What do you see? All of the objects that surround you—a book, a plant, a pen, a door and even your own body—can only be seen thanks to light. Light is a type of energy that helps us see the world we live in. When it's completely dark, it is impossible to see anything. Light comes from different places. The sun, stars, lightning and fire all give off light. So do light bulbs, flashlights and candles. Most living things need light in order to survive.

Some objects produce their own light, but most do not. The walls in the room you are in do not give off their own light. The light coming down from the ceiling lights above your head bounces right off the walls. If it didn't, we would not be able to see the walls at all. How do we see things? When light from any source bounces off an object and into our eyes, we are able to see that object. Take a look at your pencil. You can see the pencil because light is bouncing off it and entering your eyes. This "bouncing off" is called "reflection."

Transparent, or see-through, objects let the light pass right through them. Light can shine through glass and clear plastic. It can also move through water and air. When light travels, it travels in a straight line.

Some objects block the light, like trees, buildings, and even you! When an object blocks the light, light cannot pass through to the other side. This is how shadows are made. When the sun shines on a tree, it cannot shine right through the tree. The tree blocks the light beams. On the other side of the tree, you will see a dark spot that is shaped like the tree. That is its shadow, the place where the sun cannot reach.

Try standing in front of a wall that is all lit up by a flashlight. Your body does not allow light to pass through it, so it will create a shadow on the wall. You can use all kinds of objects to block the light and make shadows. Try forks and spoons from your kitchen, your shoes or a stuffed animal. Try moving your body or one of these objects around to change the shape of the shadow! The closer the object moves to the flashlight, the bigger and fuzzier its shadow will be. The further the object moves away from the flashlight, the smaller and sharper its shadow will be.

Using a mirror, you can take light from one place and make it travel to another. Point your flashlight at the mirror. Now tilt the mirror. By moving the mirror around, you can make the light beam bounce off its shiny surface and fall on different objects in the room. Have you ever wondered why you can see your own face in a mirror? Light shines on your face, then bounces off it and hits the mirror you are looking into. Then, the light bounces, or reflects, off the mirror and right into your eyes.

Light bounces around! If it didn't, we'd be left in the dark.

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- a. List two types of light and two light sources.
- b. How do we see light?
- c. What types of objects block light and what types of objects allow light to pass through.

B. Watch the video about how light travels. Complete the notice and wonder chart

NOTICE (what did you see?)	WONDER (what questions do you have?)

Extension Activity

- C. Revise your sight model using the evidence from the video and that includes labels and additions to your explanation.

Assignment #3

A. How has your understanding of how light travels to the eye changed?

B. Reread the Light Bounces article from Assignment #2. Create at least 2 shadows using objects in your house that block light. Record your ideas in the Notice and Wonder chart.

NOTICE (what did you see?)	WONDER (what questions do you have?)

Extension Activity

C. Revise your Sight model by adding one of the objects that blocked light and expanding your explanation.