THE ROCKET BUILDER – 1

Read the chapter from the autobiography of NASA scientist, Jake Gilligan.

Chapter Three

October 1957

I had been waiting outside of Finley's Electronics for over an hour— determined to get a good position. With my nose pressed against the glass, I watched the launch of *Sputnik* on seven different televisions. She looked so beautiful when all of the engines were fired up, launching her into the sky and the Earth's orbit.

I was so excited after the launch, that I rode straight over and collected Dave and Gerry. We rode to the Fairfield Library and borrowed the only two books we found about rockets. We passed them around the table, looking at the photographs and diagrams in amazement.

Before I had even realised what I was saying, I had announced to the gang that we were going to build a rocket. Of course, the boys were sceptical, saying that our fathers would think it was a waste of time and the kids at school would call us nerds. The boys were right but, as I said to them, none of us was ever going to get noticed in this town by being big football stars, so why don't we try to build a rocket instead?

We decided that Gerry's basement would be the perfect location to build a rocket so we took the books down there. Luckily, Gerry's dad was playing golf so we didn't have to explain our plans. We could all imagine what our fathers would say ...

'You are just wasting your time building rockets. Do you actually think you will leave Fairfield and become a rocket scientist? I don't think so. Go outside and play football instead.'

That week, we spoke to Miss Warner, the science teacher, and told her about our project. She was very excited and gave us a leaflet about the state science competition that was being held in December. We now had a deadline! Whenever we could get away, we would meet in Gerry's basement and discuss and design our rocket. We started to collect materials and tools and soon after, we were sawing or sanding away. I would also ride over to my Uncle Stan's mechanic shop whenever we needed parts welded together.

By the third of December we were finished! We walked up to the hills behind the town looking for a launch site, and found a flat area that was perfect. We also discovered a wide bit of discarded steel that we could use for protection in case our rocket decided to fly sideways instead of up!

Gerry, Dave and I chose a long fuse for our first rocket. I lit it and we ran behind the steel, peering out over the top.
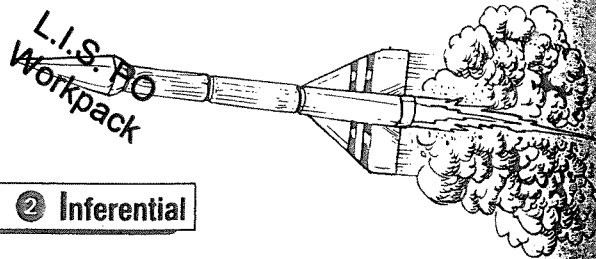
Our first launch. We counted down together ...

'10, 9, 8, 7, 6, 5, 4, 3, 2, 1 ... Blast off!'
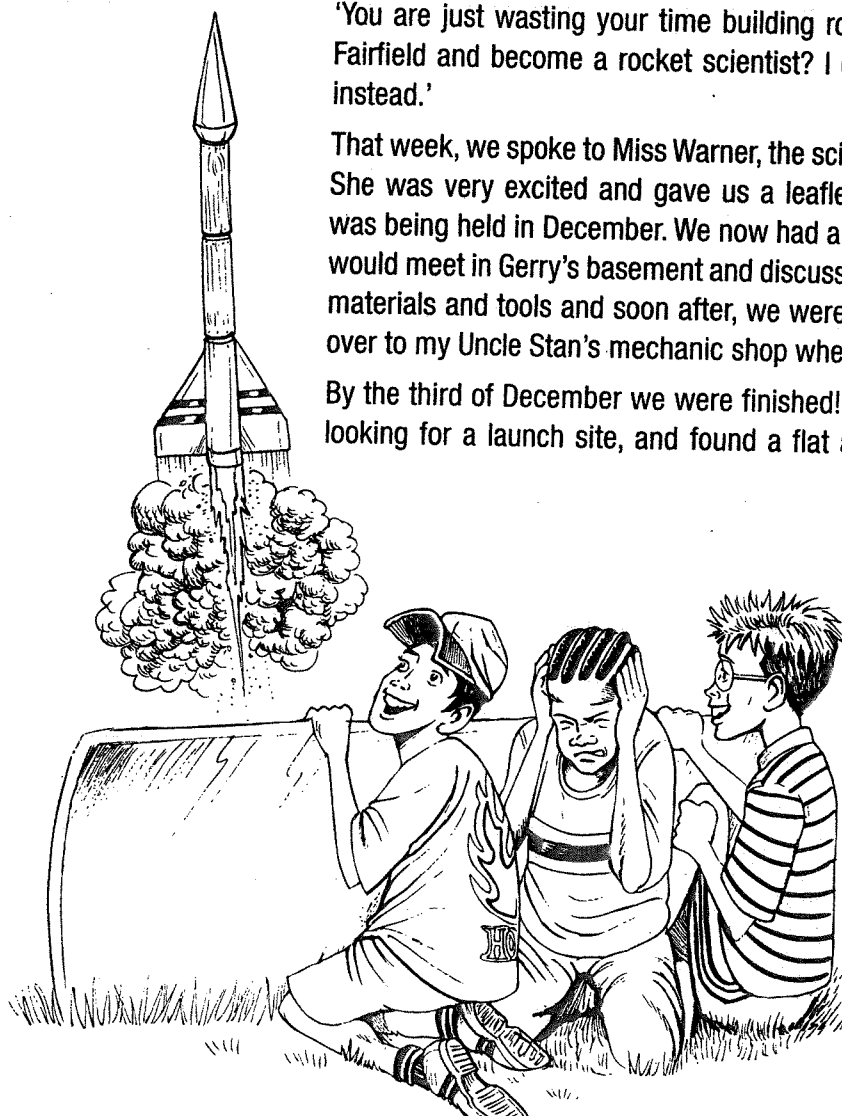
THE ROCKET BUILDER – 2

Use the text on page 7 to answer these questions.

❶ Literal

(a) Decide if the statements are true or false.

(i) According to the text, Jake Gilligan became a rocket scientist at NASA.

[True] [False]

(ii) Sputnik was launched into the Earth's Orbit in October, 1967.

[True] [False]

(iii) The Fairfield Library had many books about building rockets.

[True] [False]

(iv) The boys wanted to be noticed so they built a rocket.

[True] [False]

(v) Jake believed his dad would tell him to play football instead of building rockets.

[True] [False]

(vi) Miss Warner was the boy's English teacher.

[True] [False]

❸ Applied

(a) Even though the boys knew their fathers would be unhappy about them wasting their time building a rocket, they went ahead and built one. Why do you think this is?

_____

_____

_____

(b) Do you think the kids at school thought Dave, Gerry and Jake were nerds for building a rocket?

_____

_____

❷ Inferential

(a) In 1957, Jake Gilligan watched the launch of *Sputnik* on a television through a shop window. Why do you think he didn't watch it at home?

_____

_____

_____

(b) Why do you think the Fairfield Library only had two books about rockets at this time?

_____

_____

_____

(c) What do you think Jake's father was hoping his son would grow up to be?

_____

_____

_____

(d) List words or phrases to describe how you think the boys were feeling when:

(i) they were in Gerry's basement, building their rocket.

(ii) they were crouched behind the steel as the fuse burnt down to ignite their rocket.

Seeing things differently

You will need: a pencil, a pen (optional) and a large spoon (remember to ask before you borrow one!).

● Go around your home with your helper, and try to find reflective surfaces. You will probably find lots of mirrors that reflect, but can you find anything else?

● Make a list of the things you find.

● Did you include a spoon in your list? Borrow a large spoon and look at yourself in it. Try moving the spoon away from you and close up, and looking in both sides of the spoon.

● Draw some pictures of what you look like in the spoon. Remember to label the way you held the spoon for the image you saw.

Dear Helper,

Reflective surfaces are all around us, and there are many more than just mirrors even in the home. This activity explores how a mirror-like curved surface gives a very different view of the world around us. You may be able to find other curved mirrors for your child to look at – try the reflectors in torches or headlamps on cars, the mirrors on your car or the security mirrors in a shop. As with all glass, take great care to avoid breakages and cut fingers!

SCHOLASTIC
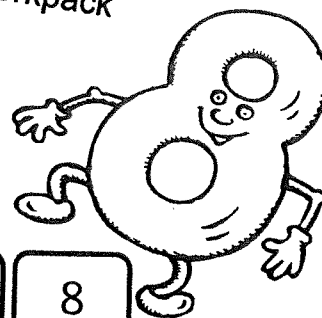
Name: _____

L.I.S. PO
Workpack

Over, under and between

You will need: a pencil.

1 Write these numbers in ascending order:

| 7.2 | 7.18 | 7.04 | 7.9 | 7.32 | 7.88 | 6.99 | 8 |

2 Write these numbers in descending order:

| 0.42 | 0.38 | 0.56 | 0.6 | 0.7 | 0.47 | 0.39 | 0.65 |

3 Write down some decimals which are:

a between 0.8 and 1.1

_____

b no less than 17.6, and
no more than 19.6

_____

c between 0.4 and 0.5

_____

d 0.5 away from 5.2

_____

e 0.25 more than 3.85

_____

4 a What is the smallest number you can
think of, that is greater than 3.5?

_____

b What is the highest number below
50 you can think of?

_____

5 What is the common fraction value of the underlined digit:

a 30.6̲3 _____ **d** 28.79̲8 _____

b 17̲5.8 _____ **e** 8.364̲ _____

c 18.32̲ _____ **f** 27.0̲21 _____

Dear Helper,

At school your child has been working with decimal numbers. Please look over the answers and discuss any problems, but let your child tackle the sheet first.

PHOTOCOPIABLE

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Adding distances
Sheet 2

Children are in teams of three.
They each throw a bean bag as far as they can. The distance is measured. They add the three distances.
The team with the greatest total distance wins.
Find each team's total distance to find out who won.

Team	Distance 1	Distance 2	Distance 3	Total distance
Awesome trio	9.72m	10.34m	11.06m	
Mighty three	12.31m	10.97m	11.86m	
Brilliant bean baggers	11.67m	8.85m	10.42m	
Terrific throwers	13.05m	9.48m	9.83m	
Lofty lobbers	10.28m	11.88m	12.19m	

Adding distances
Sheet 1

Snail	am	pm
Albert	6.47m	2.28m
Bob	10.35m	9.37m
Celia	12.18m	11.56m
Daphne	11.72m	13.43m
Edna	13.53m	10.64m
Fred	12.38m	11.29m
Gertrude	11.78m	12.54m
Horace	6.49m	3.73m

1. Find the total amount each snail crawled.
2. When rounded to the nearest metre, which was the mostcommon distance crawled by the snails?