

Name: _____

LET'S INVENT WITH FRANKIE SPARKS

Frankie Sparks is the world's greatest third-grade inventor. She solves her everyday problems by inventing new solutions. Now it's your turn to invent along with her!

In *Frankie Sparks and the Class Pet*, Frankie's class is getting a new class pet, but there are some limitations. Get ready to put your thinking cap on and solve the class pet problem!



Illustration by Nadja Sarell

THE STORY

The best thing EVER is happening in Frankie Sparks's third-grade class: They are getting a class pet! Their teacher, Miss Cupid, tells them the pet, has to meet some "parameters." Their pet must:

1. Fit in an aquarium.
2. Cost less than \$50.
3. Be easily portable.
4. Be able to be left alone for the weekend.

THE CHALLENGE

What kind of class pet would you want? Your job is to:

1. Pick a pet.
2. Identify potential problems with keeping this pet in a classroom.
3. Brainstorm solutions.
4. Design and build your solution.
5. Test your solution.
6. Share your invention.

Are you ready to invent?

Name _____

STEP 1: PROBLEM IDENTIFICATION

What kind of pet would you like to have as a class pet? A snake? A cat? A baby T-Rex? In the box below, make a list and then circle your top choice.

DOES YOUR CHOICE MEET THE PARAMETERS?

Circle YES or NO:

1. Would it fit in an aquarium (2 ft. x 1 ft. x 1 ft)? **YES** or **NO**
2. Is it easily portable? **YES** or **NO**
3. Does it need to be fed every day? **YES** or **NO**

If you answered **NO** to any of the questions, you are ready to write your problem statement.

If you answered **YES** to all of the questions, you need to think a little more. What challenges would this pet present? What does this pet need? Once you have an idea, write your problem statement.

Problem Statement:

A problem statement is a sentence that explains the problem you are going to solve. Frankie's problem statement is, "I would like a rat for a class pet, but rats need to be fed every day. So, I need to design a way for the rat to get fresh food every day." Fill in the blanks below to create your problem statement.

I would like a _____ for a class pet, but _____
_____, so I need to design a way to _____.

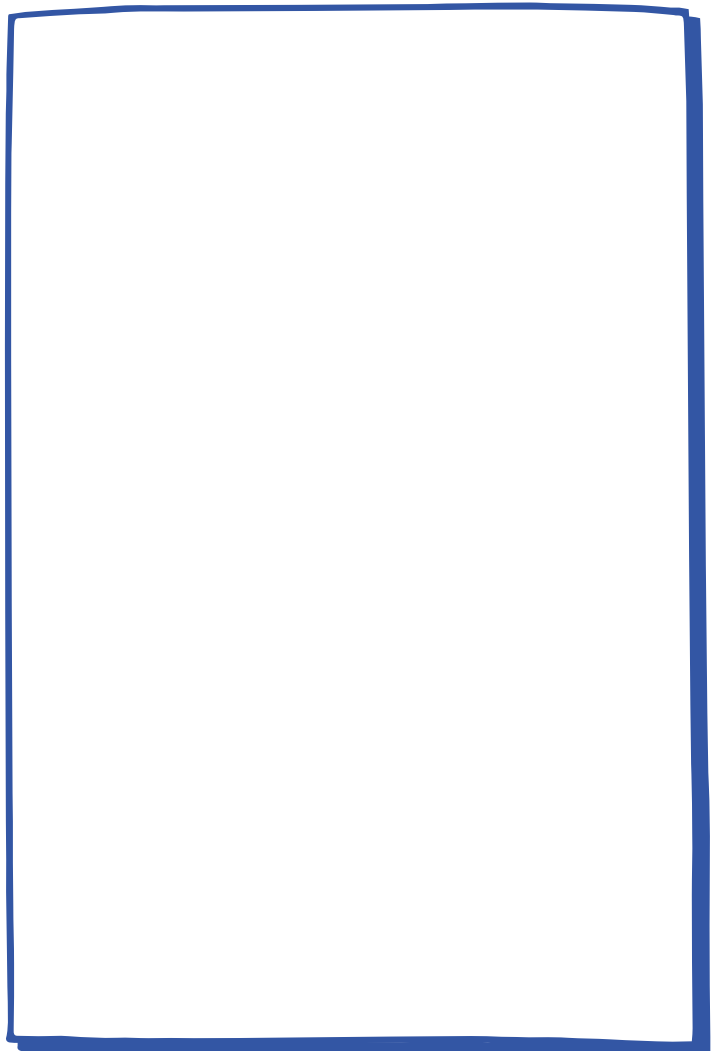
Name _____

STEP 2: BRAINSTORM

Come up with as many possible ways as you can to solve the problem. They can be practical or zany, easy or complex — in the brainstorm stage, there is no such thing as a bad idea. Write or draw your ideas in the space below.

Write

Draw



Now, look over your ideas. It can help to talk them over with a friend. Is there an idea that seems like it would work? Could you combine some ideas? Is there a way to adapt one of your zanier ideas into something more practical? Once you have that figured out, it's time to sketch your final design.

Name

STEP 6: SHARE AND EVALUATE

When you have a great idea, you should share it near and far! Share your invention with your classmates and your family. If it's okay with your grownups, you can also share your invention with Frankie! Share on social media with #FrankieSparksInvents and tag the author.

Inventors also always self-evaluate. Answer the questions below about your invention and the process.

What is the best thing about your invention?

What did you do well while working on this project?

If you do another project like this, what would you do differently?
