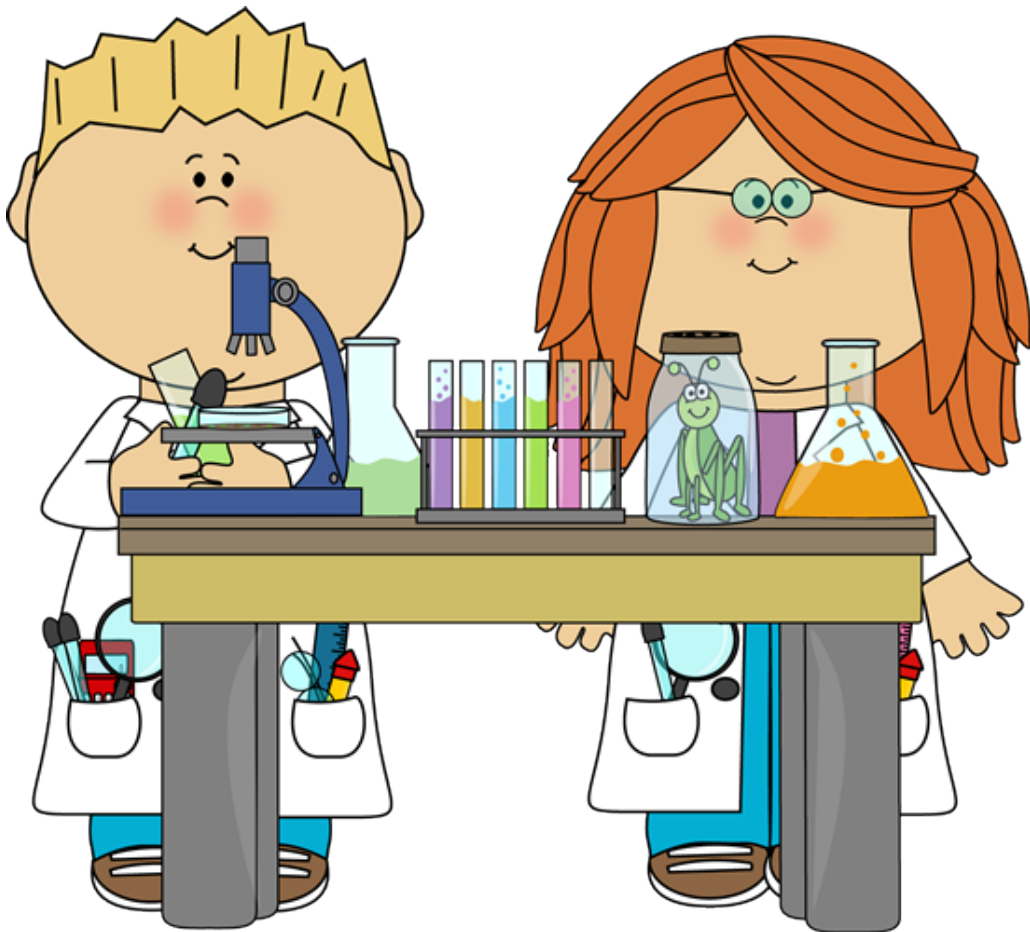


Be a Scientist

Academic Content Standards

- Develop inquiring minds and curiosity about science.
- Acquire knowledge, conceptual understanding, and skills to solve problems and make informed decisions in scientific and other contexts.
- Develop skills of the scientific method to design and carry out scientific investigations and evaluate scientific evidence to draw conclusions.
- Understand how to complete scientific investigations safely.



Name: _____

Student Number: _____

Homeroom: _____

How can I be a scientist?

Scientists and children have something in common: they both ask many questions, and they want to learn new things. Asking questions and finding answers is very important. Scientists have made some very easy steps that will also allow you to find answers. It is called the scientific method.

1. Ask a Question

What do you want to learn about? Be curious and think of questions you want to know the answers to.



2. Research and Guess

What do you think the answer might be? Try to find some information about it. Put your guess into a statement that can be tested. This is called the hypothesis.

3. Test Your Guess

Think up an experiment that will tell you if your hypothesis is right. Do your experiment.



4. Observe and Record

Observe what happens during your experiment and make notes about what happened.

5. Make a Conclusion

What can you say about your results? Does it agree with your hypothesis? Or do you need to design a new experiment and try something else to find your answer?

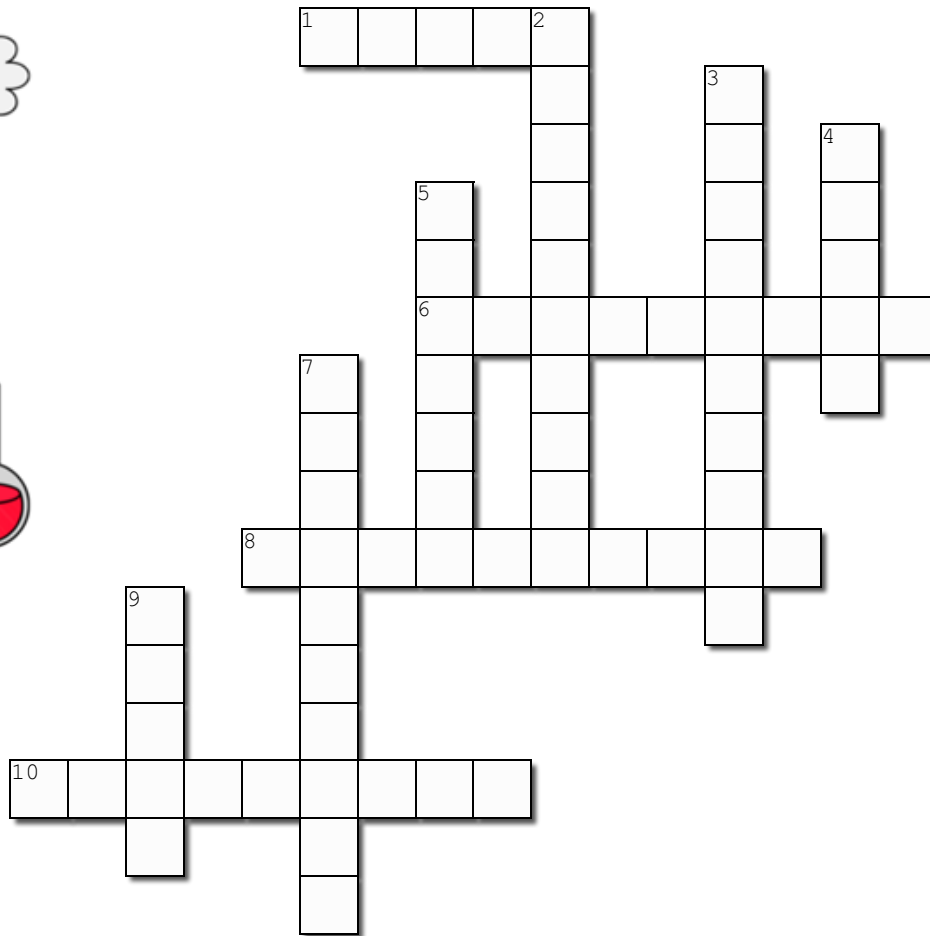


6. Share Your Results

Scientists learn from each other. When you share your answers, it may give someone else another idea.

The Scientific Method

Complete the crossword puzzle below.



Across

1. You should _____ your results so that others can learn from your experiments.
6. A person who is trained and works in science.
8. The method that scientists use to find answers.
10. Scientists and children both ask many _____.

Down

2. A scientist will do an _____ to see what happens.
3. This is a statement that you make using your guess.
4. Before doing an experiment, you should _____ what will happen.
5. It is important that you _____ what happens in your experiment.
7. After you know what happened in your experiment, you can make a _____.
9. You should take _____ to show what happened in your experiment.





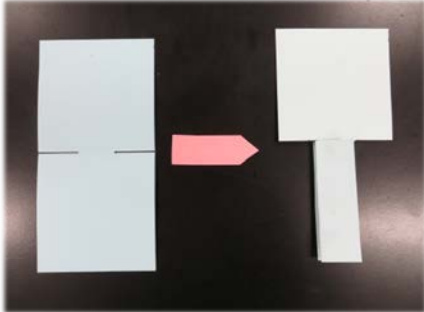
Name: _____

Student Number: _____ Homeroom: _____

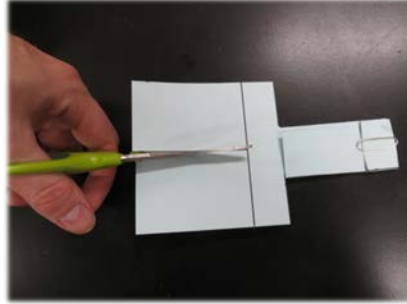
How can I make my paper helicopter the slowest?



Make the following paper helicopter.



1. Use paper that is twice as long as it is wide. Cut two slits halfway down that are about one third of the width. Fold one side to make a strip.

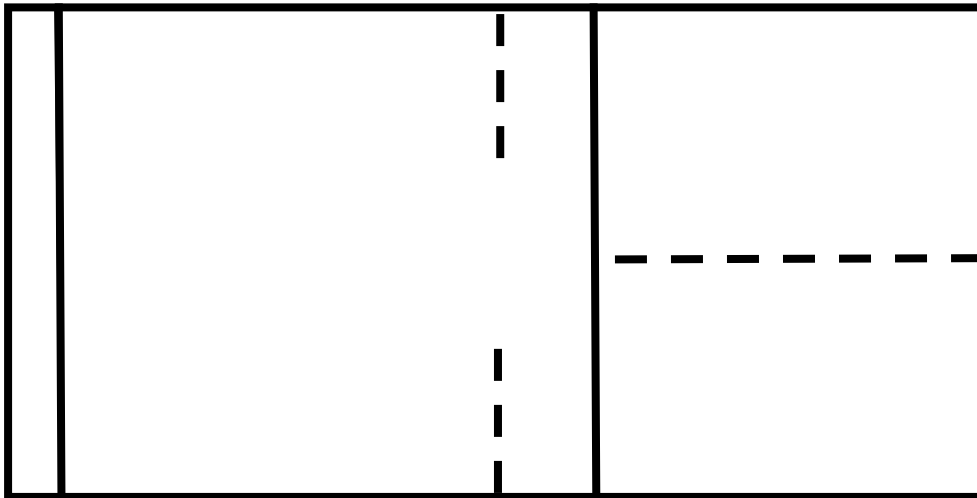


2. Fold the bottom over and add a paperclip. Cut the top part down the middle to make the blades.



3. Fold one blade to the front and the other to the back. Drop it from a high place. Observe how it moves.

Here is a basic design that you can try to begin with.



Let the scientific method begin!



1. Ask a question:

How can I make the slowest paper helicopter?



2. Try to find some information that will help you and guess what you could try.



3+4. Test your guess. Observe what happens and record.
(Draw your designs below and describe how they fell.)



5. What things helped to make a slow paper helicopter?



6. Share Your Results.

See what other students did. Think about some other ideas that you could try. Who has the slowest helicopter in your class?



Name: _____

Student Number: _____

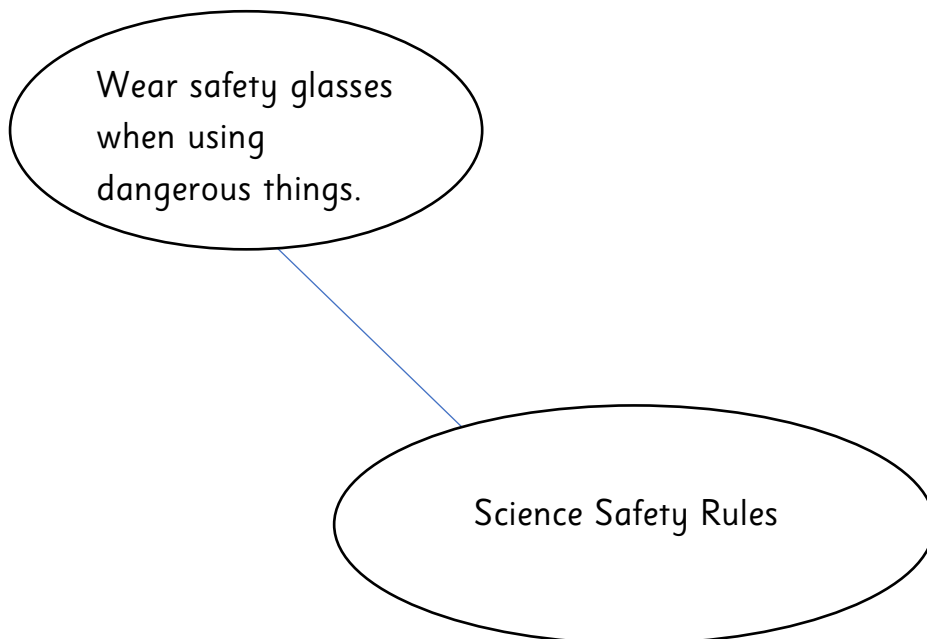
Homeroom: _____

How can I do experiments safely?

Safety is very important when doing science. All the experiments you will do this year have been tested and are safe, as long as you follow your teacher's instructions carefully.



Think of some general safety rules that you should follow in your science lessons this year. An example has been done for you.





Choose one of the safety rules that you wrote and make a poster for it. Use the area below to practice. Show your teacher. They will edit it for you and offer suggestions. Then, you will make your good poster.

A large, empty rectangular box with a dark blue border. This box is intended for the student to draw their poster based on the instructions above.



Name: _____

Student Number: _____ Homeroom: _____

How can I control the direction of a paper plane?



Now you know how to do experiments safely. Let's look at another challenge. Make the NASA paper plane the teacher shows you.



After making your plane, it should look like the picture to the left. Here are your challenges.

1. Make your plane move up.
2. Make your plane move down.

BONUS: Can you make it move in any other direction?

Let the scientific method begin!



1. Ask a question:

How can I make my paper plane go up and down?



2. Try to find some information that may help you. Make a guess as to what you could do.

Go up	Go down	Other



3+4. Test your guess. Observe what happens and record.

Go up	Go down	Other



5. Make a Conclusion. What made your paper plane go up or down?



6. Share Your Results.

See what other students did. Think about some other ideas that you could try. Who has the most accurate paper plane?

