



# Science Fair Investigation

Ella, Johnny, and Harry walked quickly down the stairs in front of their school. They were very excited about the assignment their teacher had just given them.

"I can't believe that we get to work together on a science fair project!" Ella said.

"Me neither," Johnny said. "Do you guys have any ideas about what we should do?"

"I have NO idea," Ella answered. "I don't even know where to start."

"My mom is a research biologist, and she says that she starts any project with a question she wants to know the answer to," Harry said.

"That's a great idea!" Johnny said. "So what do you guys want to know?"

"Well," Harry said, "we have been learning a lot about germs since I got sick, but there is still a lot we don't know."

"Yeah!" said Ella. "Like why do some people who are exposed to germs get sick when others don't?"

"Or do some cleaning methods work better on some materials than others?" said Johnny.

"Or why are some illnesses common in other parts of the world, but not here?" Harry added.

"Well, it sounds like we definitely want to know more about germs and illness," said Ella. "Let's go brainstorm!"



**Help Ella, Johnny, and Harry with their science fair investigation. Follow the steps below to design a science fair project about germs.**

1. With your classmates, brainstorm a list of questions you have about germs and illnesses caused by germs.

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2. Circle your two favorite questions.

3. Research topics related to your questions. Write any new questions below.

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4. Brainstorm ideas for experiments that could answer the questions you have.

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5. Write the research question you decide to explore.

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6. Write a hypothesis or statement that you think will answer the research question.

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7. Write what your independent variable will be.

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8. Write what your controlled variables will be.

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9. Write what your control will be.

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10. Write the steps in your experiment.

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11. Describe how you will measure and collect data.

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12. Describe how you will display your data and publish the results of your experiment.

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**Case Report:** Now that you have presented your science fair project, it is time to write your case report.

1. Did your experiment turn out as you expected? If not, what are some possible reasons? \_\_\_\_\_

2. If you were to do the experiment again what would you change? \_\_\_\_\_

3. Did this experiment make you think of any new questions that you might want to investigate? If so, what are they? \_\_\_\_\_