

ASK QUESTIONS AND DEFINE PROBLEMS

- Can I generate answerable questions?
- What do I know?
- What questions have not been answered?
- Will there be problems in my solution?



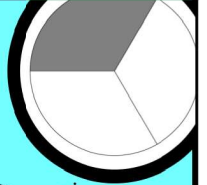
PLAN AND CARRY OUT INVESTIGATIONS

- Identify questions to be investigated.
- Identify variables (change) and controls (same).
- Design and perform experiments to test my hypothesis.
- Decide what data will be collected? How much?
- What tools are needed?



DEVELOP AND USE MODELS

- I can build models to understand and build concepts.
- I can use models to explain and predict behaviors of a system or test a design.
- I can change my models based off of evidence.



ANALYZE AND INTERPRET DATA

- I can use tables and graphs to display and analyze data.
- I can recognize patterns and see relationships in my data.
- I can change my hypothesis if my data doesn't support it.
- I can analyze my design through a series of tests.



USE MATHEMATICS AND COMPUTATIONAL THINKING

- I can use mathematics to analyze my data.
- I can express relationships by writing mathematical models and equations.
- I can use technology to collect and analyze data.
- I can use mathematical models to test my predictions and design.



ENGAGE IN AN ARGUMENT FROM EVIDENCE

- I can defend my explanation.
- I can formulate evidence based on solid data.
- I can see the evidence and understand it.
- I can collaborate with my peers to figure out an explanation.



OBTAIN, EVALUATE, AND COMMUNICATE INFORMATION

- I can communicate findings clearly and persuasively.
- I can make meaning out of scientific text.
- I can engage in discussion with scientific peers.
- I can evaluate the validity of the findings of others.



CONSTRUCT EXPLANATIONS AND DESIGN SOLUTIONS

- I can evaluate information and form a hypothesis
- I can construct explanations or models.
- I can design a variety of solutions to a problem.

