Observation

Your Name ……Date……...

Have you heard the expression 'I couldn't believe my eyes'? Many explorers roaming across the deserts of Australia saw water in the distance. But when they rushed up to have a drink, they swallowed a mouthful of sand. It was not water they saw, but a mirage.

These explorers soon learned not to trust their sense of sight only - they realized they needed to use other **senses** too. Our senses are sight, hearing, touch, taste and smell, and these are our main ways of finding out about the world. We should use as many senses as possible in science. In this way we may not be so easily tricked by mirages.

In science, as you explore amazing things in this world, you need to make accurate **observations**. Observations are what we can say about things we see, hear, smell, taste and touch. We can also use measuring equipment to help us with observations. In the experiment today, you will need to use four of these five senses to make some accurate observations. Your group should aim to make the best set of observations in the following experiment.

Experiment : Pop the corn

Equipment: Small tin can, with 20 kernels of corn
Bunsen Burner matches
Tripod bench protector
Gauze mat safety glasses

Method: The method tells you the steps to follow.

1. Make as many observations about the unpopped corn as possible. Record these. ☐
2. Place the tin can with the corn kernels on the gauze mat. Light the Bunsen burner, and begin heating on a blue flame. ☐
3. Use every sense, except taste, to make observations from the time you start to heat. ☐
4. Clean up thoroughly. ☐

Part 1. Purpose of the text

Find the key ideas from the text, and their meaning in the context of the experiment. **Organise** below.

a. Title (purpose) _____ ☐

Key word(s)	_____	_____	_____
Line no.s	_____	_____	_____
Meaning in context	• _____	• _____	• _____

Part 2. Infer

Analyse the text again, then answer these questions by **synthesising** some new ideas: ☐

a. Why can't you use your sense of taste in this experiment?

_____

_____

b. Why must you use a blue flame to heat the tin can?

_____

_____

Part 3. Experiment

Popcorn Observation Experiment

a. **Generate** observation data before popping the corn, during, and then after, and **organise** into this table:

Observations	Before popping	During popping	After popping
Sight			
Hearing			
Smell			
Touch			

b. **Evaluate** your observations by saying how accurate and trustworthy they are.

_____

c. **Analyse** the data you've gathered to explain any patterns (common things happening every time) that you observed during the experiment.

_____

_____

Part 4. Create

a. **Synthesise** two questions you have after doing this writE science sheet:

_____

_____

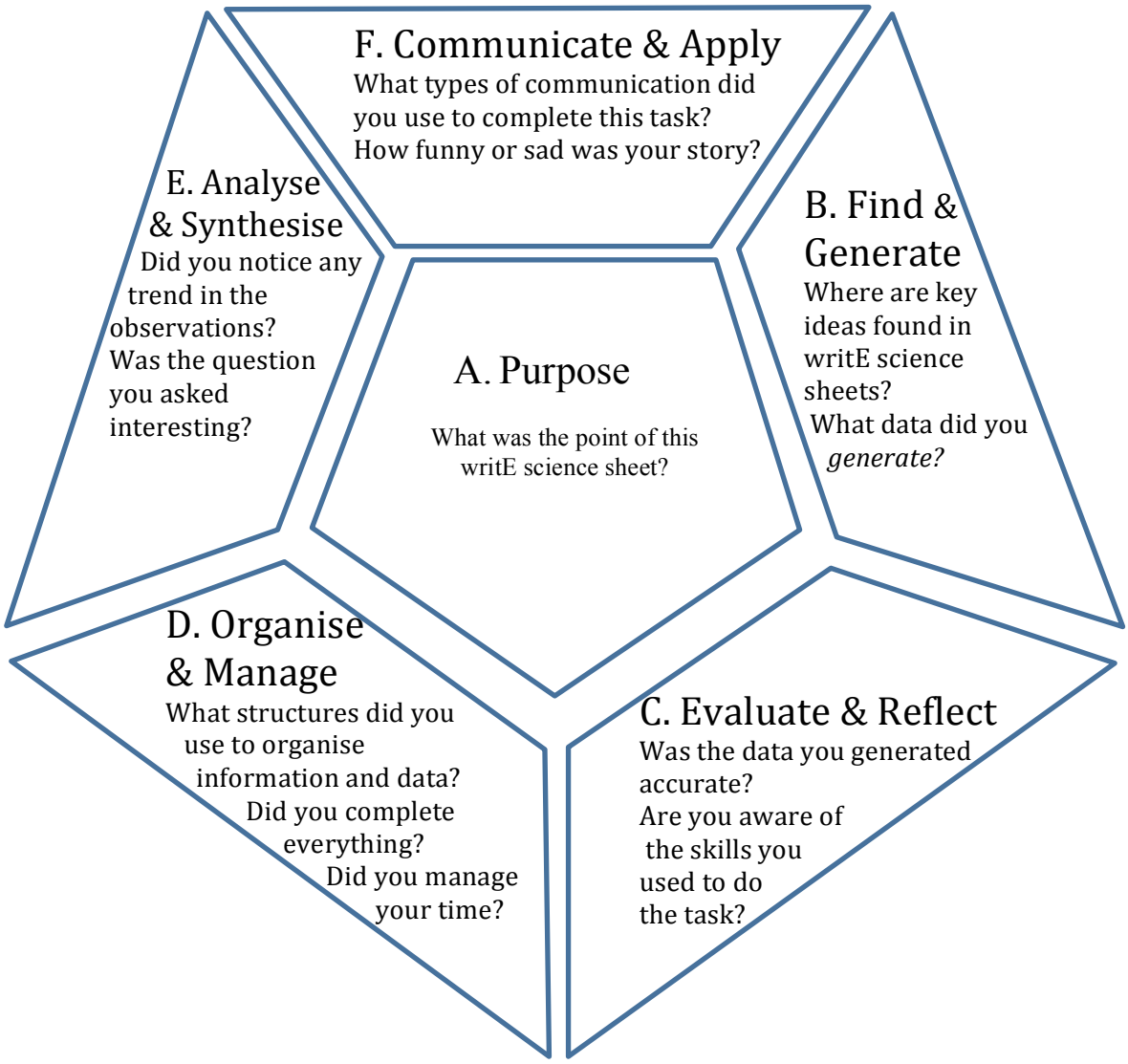
b. **Communicate** in writing about a time when you made an incorrect observation, and something funny or bad happened as a result.

_____

_____

_____

Part 5. Communicate and **apply** your understanding of the key words: write a short story about some explorers lost in the desert (use the next piece of lined paper. Make up a title, and include the word ‘mirage’.)



Part 6. Evaluate and **reflect.**

Evaluate this activity and **reflect** by suggesting how to improve it.

Page 4 and onwards given out at teachers' discretion.

Teacher's notes:

Differentiation of the Curriculum:

The RSD Pentagon (above) is intended for students who are demonstrating mastery of the cognition in the first 3 pages, to enhance their metacognition.
For those completing pages 4-5, you may negotiate reduced workload for the earlier activities, e.g., line numbers for key words.
Other tasks that more advanced students can complete include:

- Use the SO (Structured Overview) to write three well-structured paragraphs that summarise this writE science sheet,
- Writing an extended story, or
- Inferring why popcorn pops, and devising experiments to test this.

For the whole class, some of students' favourite questions could be called out, and one or two of these may be a launch pad for further investigation.
As each student finishes, have pairs compare and contrast each pentagon.