Infographic display:

One of the most critical skills any scientist or engineer must have is the ability to communicate effectively. Scientific discovery is only beneficial if it can be effectively communicated to the public, other researchers, and engineers. Some ways in which scientific information is communicated include: written reports, presentations, display boards, posters and infographic display.

An **infographic display** is a visual representation of information or data that combines text, images, and design elements to convey complex concepts or data in a clear, concise, and engaging manner. Infographics are designed to make information more accessible and understandable to a wide audience, often using charts, graphs, icons, and illustrations to simplify and enhance the message.

What is an infographic board?

An **infographic** is a collection of imagery, data visualizations like pie charts and bar graphs, and minimal text that gives an easy-to-understand overview of a topic.

What should you include?

One of the first steps when designing a display is determining what content is needed to convey the story. It is important that the audience is able to determine the 'What?', 'Why?', 'How?' of the project as well as identify the conclusion made. In order to effectively do this, displays should contain at minimum:

- **Title:** The project title should be brief yet thought provoking to engage the audience in further exploring the displays message.
- **Abstract:** The abstract provides a complete summary of the project and entices readers into reading all the content presented.
- **Objective:** The objective statement describes the purpose of the project and why it is important. It may also include anticipated outcomes. Some

projects and programs may refer to this section as 'Question and Hypothesis'.

- **Materials & Methods:** This section provides information of how the study was conducted and any procedures and materials that would be needed to replicate the study.
- **Results & Data:** This section provides all the important analysis and data results. Graphs and charts play a critical role in telling the story, but be certain that they can be easily read and understood.
- **Conclusions:** This final section of the display summarizes the results in a few sentences and describes how the results support drawn conclusion.

How should it look?

While color is a great way to add emphasis and grab attention, the purposeful use of high-quality pictures and graphics can also help. Photos are a great way to tell the story of the process and allow the audience to visualize the story. Be sure that captions are provided for each photo use. Graphs and charts are necessary to explain data and its significance. Be certain to label the charts and graphs so that the audience can understand what the data is telling them.

There are a variety of design items to consider that will help with this:

- **Font:** The size, style, and color of the font plays a large role in the readability of the display. Any main body text should be at least a 16-point traditional font (i.e. Arial, Times New Roman, or similar fonts).
- **Color:** Color can be used to grab the attention of the audience, but if the wrong colors are used it can make information very difficult to read. Be sure that to choose colors that contrast which allows text to stand out from the background. Also, remember when designing a color scheme less is more. Keep your color choices to two main contrasting colors with one to two additional colors that are used sparingly for adding emphasis.
- **White Space:** The blank space of the display board is as vital as the pictures and words that are presented. White space guides the audience's eyes and allows the content to stand out. Too much white space causes eyes to wonder while too little can be overwhelming.

	Level 4	Level 3	Level 2	Level 1
Knowledge/ Understanding	Provides thorough and meaningful information related to the topic	Provides a considerable amount of information related to the topic ,	Provides some topic related information,	Provides limited or unnecessary data to topic
Thinking/ Inquiry Organization	Thorough organization. Clear and consistent method	Considerable organization. Easily spaced and clear to read.	Some organization, information is somewhat clear	Little organization evident- information is confusing and difficult to read
Communication Form and Audience	Thorough use of infographic features, selected features convey information successfully	Considerable use of infographic features that clearly convey information	Some use of infographic features, some features convey information	Limited use of infographic features, or features convey information poorly
Application Language conventions	Uses language conventions with thorough effectiveness	Uses language conventions with considerable effectiveness	Uses language conventions with some effectiveness	Uses language conventions with limited effectiveness, very unclear

Example:

The Human Body

Facts you may not know about your own body
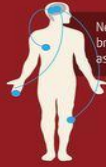
Nerve impulses in the brain travel as fast as **170 miles per hour**

The brain operates on the same amount of power as a 10-watt light bulb

20%

Your brain uses 20% of the oxygen that enters your bloodstream

The brain is more active at night than during the day

80%

80% of the brain is water

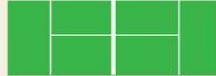The largest internal organ is the small intestine

The heart creates enough pressure to squirt blood **30 feet**

The acid in your stomach is strong enough to dissolve razorblades

The surface area of a human lung is equal to a tennis court

You could remove a large part of your internal organs and survive

The hardest bone in the body is the jawbone

Bone is stronger than some steel

The feet account for one quarter of all the human body's bones

The tooth is the only part of the body that can't repair itself

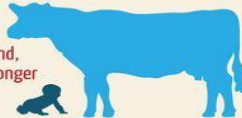**Facial hair** grows faster than any other hair on the body

The fastest growing nail is on the middle finger

There are as many hairs per square inch on your body as a chimpanzee

Your nose can remember **50,000** different scents

Pound for pound, babies are stronger than an ox.

It is impossible to tickle yourself

The largest cell in the body is the female egg

The smallest is the male sperm

Monday is the day of the week when the risk of heart attack is greatest

We are about 1 cm taller in the morning than in the evening