



SCIENCE STORY TELLING FOR IMPACT

Prof. Upenyu Guyo & Charmaine
Kahiya



Women, Science & Development



What is RESEARCH?

Research is a broad range of intellectual and scholarly activities that includes the:

- Acquisition;
- **Dissemination**; and
- Application

of knowledge, skills and techniques.



- The ability to communicate is ONE of the THREE key activities of RESEARCH.
- “The dissemination of scientific ideas/findings is crucial and inseparable from research itself”.



When you write, you are
telling a story and the
story should flow..... Prof
Ben Zeelie

Story Telling in Science



- ☐ Everyone has a story to tell.
- ☐ Research is not all about figures and charts.
- ☐ A captivating story can be created in Science.

Remember-

Science has taken people to far-flung places;

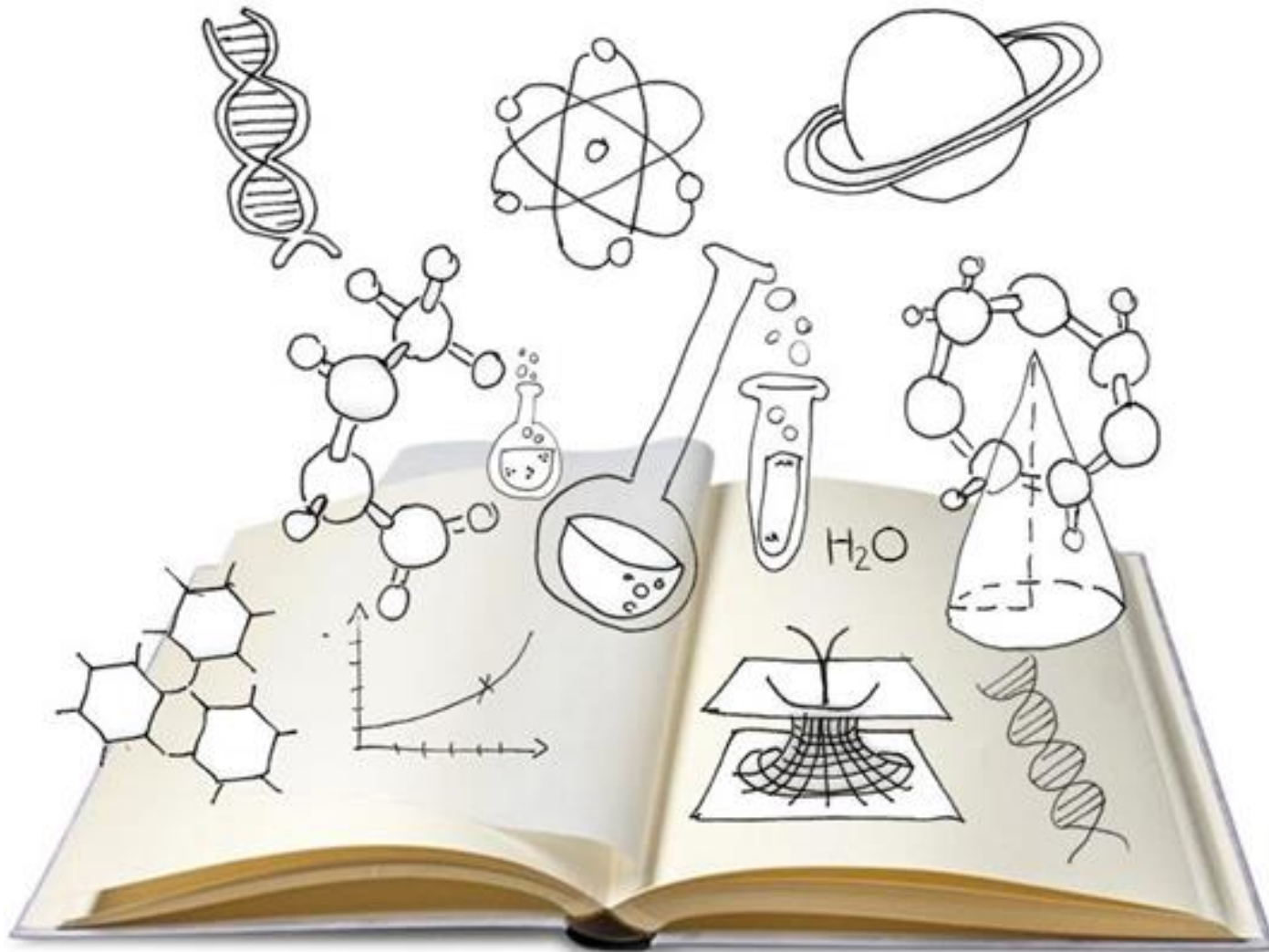
Science has led to amazing new discoveries

and produces;

Science has produced some challenges that

produce interesting drama

Public Understanding of Science

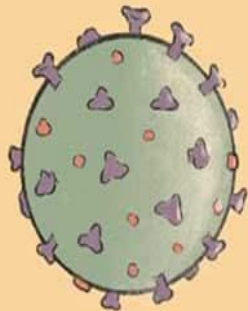


Simplifying the complex



Create a captivating story





SCIENCE STORYTELLING

- HELPS COMMUNICATE DIFFICULT TOPICS
 - COMPLEX SCIENCE
 - SENSITIVE HEALTHCARE TOPICS
- PURPOSE CAN BE TO ENGAGE, EDUCATE, AND INVOKE EMPATHY
- HELPS SHAPE OUR PERCEPTION OF THE WORLD AROUND US (AND INSIDE OF US)



HOW STORYTELLING AFFECTS THE BRAIN

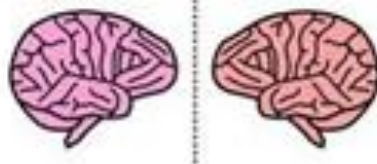
NEURAL COUPLING

A story activates parts in the brain that allows the listener to turn the story into their own ideas and experience thanks to a process called neural coupling.



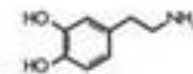
MIRRORING

Listeners will not only experience the similar brain activity to each other, but also to the speaker.



DOPAMINE

The brain releases dopamine into the system when it experiences an emotionally charged event, making it easier to remember and with greater accuracy.



CORTEX ACTIVITY

When processing facts, two areas of the brain are activated (Broca's and Wernicke's area). A well-told story can engage many additional areas, including the motor cortex, sensory cortex and frontal cortex.



Story Arc



Story arc shows how narrative tension changes over time. Narrative tension is the feeling of excitement or suspense the reader or listener gets from the story; the feeling of wanting to know what is next.

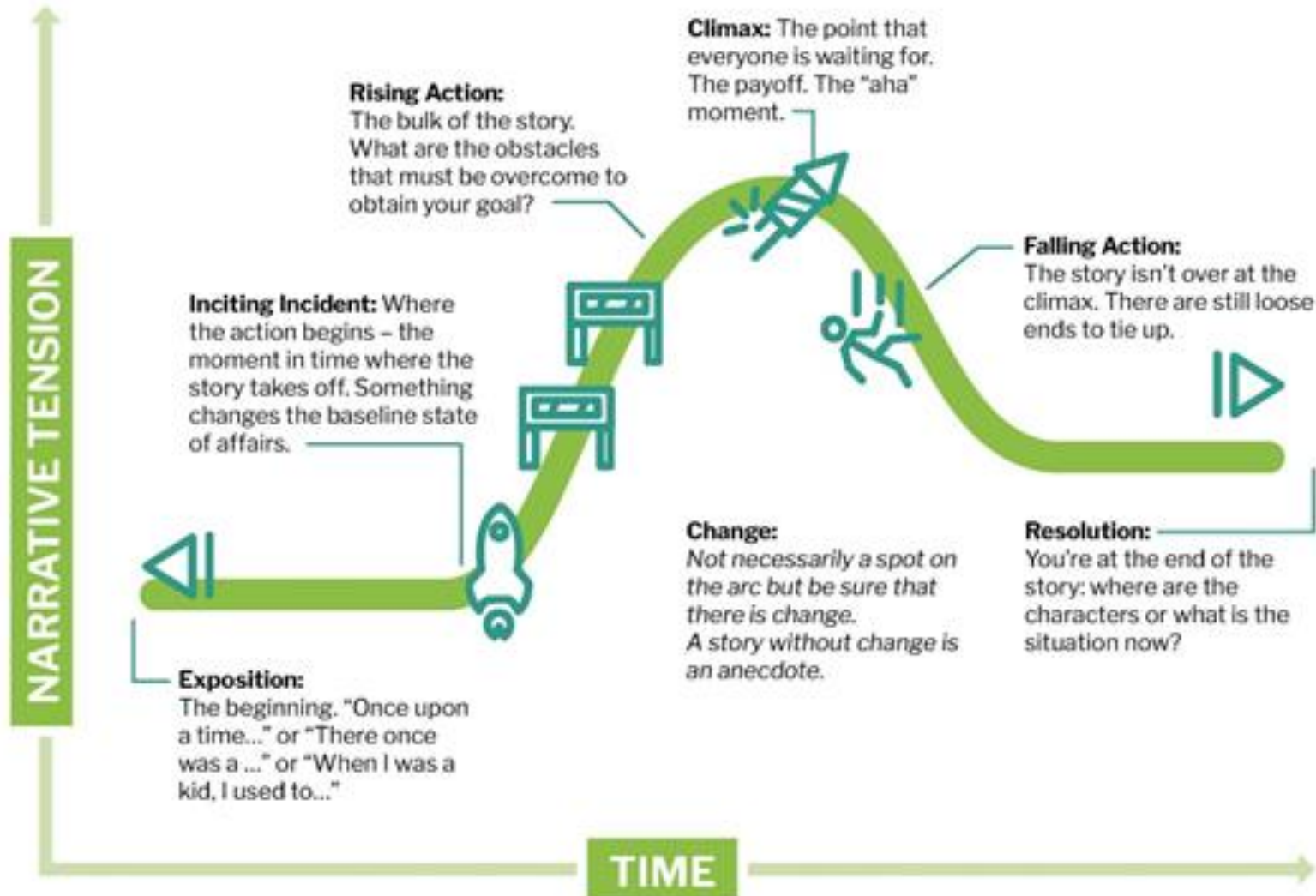
Story Arc



- ❑ The exposition, which sets the stage by describing the world.
- ❑ The rising action. The story begins after the exposition, when a series of events raise the narrative tension towards its maximum point. The events can be a series of experiments, for instance, that only partially solve the scientific question that the protagonist set to solve, or even lead them astray.
- ❑ The climax. The tension rises until its maximum, the turning point of the story. This could happen, for instance, as the final experiment is being set up, and the central question of the story is about to be solved.
- ❑ The falling action. After this, the tension decreases until reaching again the starting point: maybe the experiment is successful and gives the key to interpreting the question that was described during the exposition.

Gustav Freytag

Basic components of a story arc



Incorporate narrative factors



- ☐ **Characters** (the scientists doing the research).
- ☐ **Scenes** (context for the research or the lab in which it was done).
- ☐ **Events** (challenges you encountered or discoveries you made).
- ☐ **Causality** (the reason you made a decision or interpreted data in the way you did).
- ☐ Narrative factors make stories more interesting, understandable, believable, and persuasive.
- ☐ They also help your audience to internalize and remember the information you're sharing.

Characteristics of a story



- ❑ **Some characters** – among those, the protagonist. It is not always a human being – it can be an organ of the body, a herd of endangered animals, or even a subatomic particle.
- ❑ **The setting:** where are we when the story begins? What do we know about the topic we are talking about? For instance, our story could start in a lab, where a scientist is running his/her research; it could be on a battlefield, with a young doctor trying to save lives;

Story types



- ❑ **Mystery** - research that addresses long-standing questions in science. The scientist plays the detective role. Tries to address the how, why and what transpired. Story starts at low point where an event of unknown origin or cause has transpired
- ❑ **Discovery** - unexpected findings - process builds tension and expectation as we move closer to a discovery
- ❑ **Rescue** – Science in service to the community eg. a solution to a pandemic. A hero to the rescue.

Key issues in a story



- ❑ A good story needs a character that experiences both highs and lows, moving between despair and prosperity.
- ❑ The key to a science story is the opportunity to share the “**So what?**” of a scientific study.
- ❑ Compelling characters, vivid imagery, drama and moments catharsis should/can be used to keep listeners enthralled.

Key issues in a story

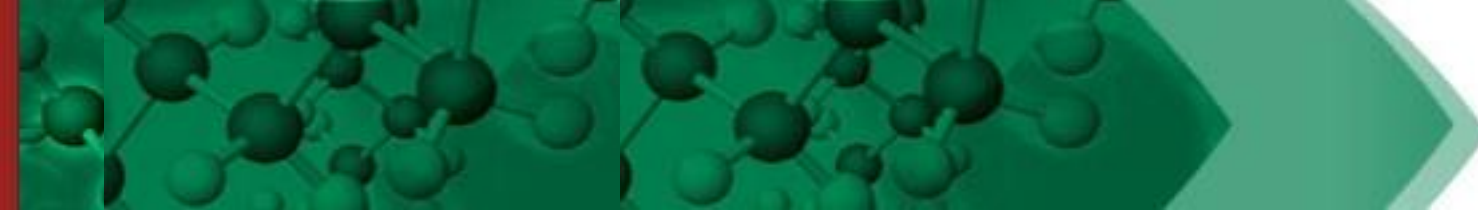


- ❑ Not many people will care how you do your research, but most people will care about why you do your research.
- ❑ The '**so what?**' is the most important question of all and you need to be able to answer this question before you start writing science stories.
- ❑ Don't use scientific terms or jargon. Explain scientific terms using everyday language, metaphors or analogies.

Keep in mind



- ✓ Keep the story simple.
- ✓ Focus on making the story relevant and meaningful to your audience.
- ✓ Front-load the story to keep your audience interested.
- ✓ Avoid jargon - use simple language but don't oversimplify.
- ✓ Include the people and the process (challenges, emotions, excitement, successes, collaborations, etc.).
- ✓ Enjoy your story.



**Thank
You**

