

SIMONA CERRATO | 6 APRIL 2023

SCIENTIFIC COMMUNICATION TECHNIQUES: PUBLIC SPEAKING

**WHAT ARE THE GOOD ELEMENTS OF A
GOOD PRESENTATION?**

FOUR QUESTIONS

MOTIVATIONS

why...

are you telling this particular story?

CONTENT

what...

are you going to tell?

AUDIENCE

who...

are you speaking to?

TIME

**when (and how long)...
are you going to speak?**

objectives: why communicate? what message?

personal history, self perception, interests and

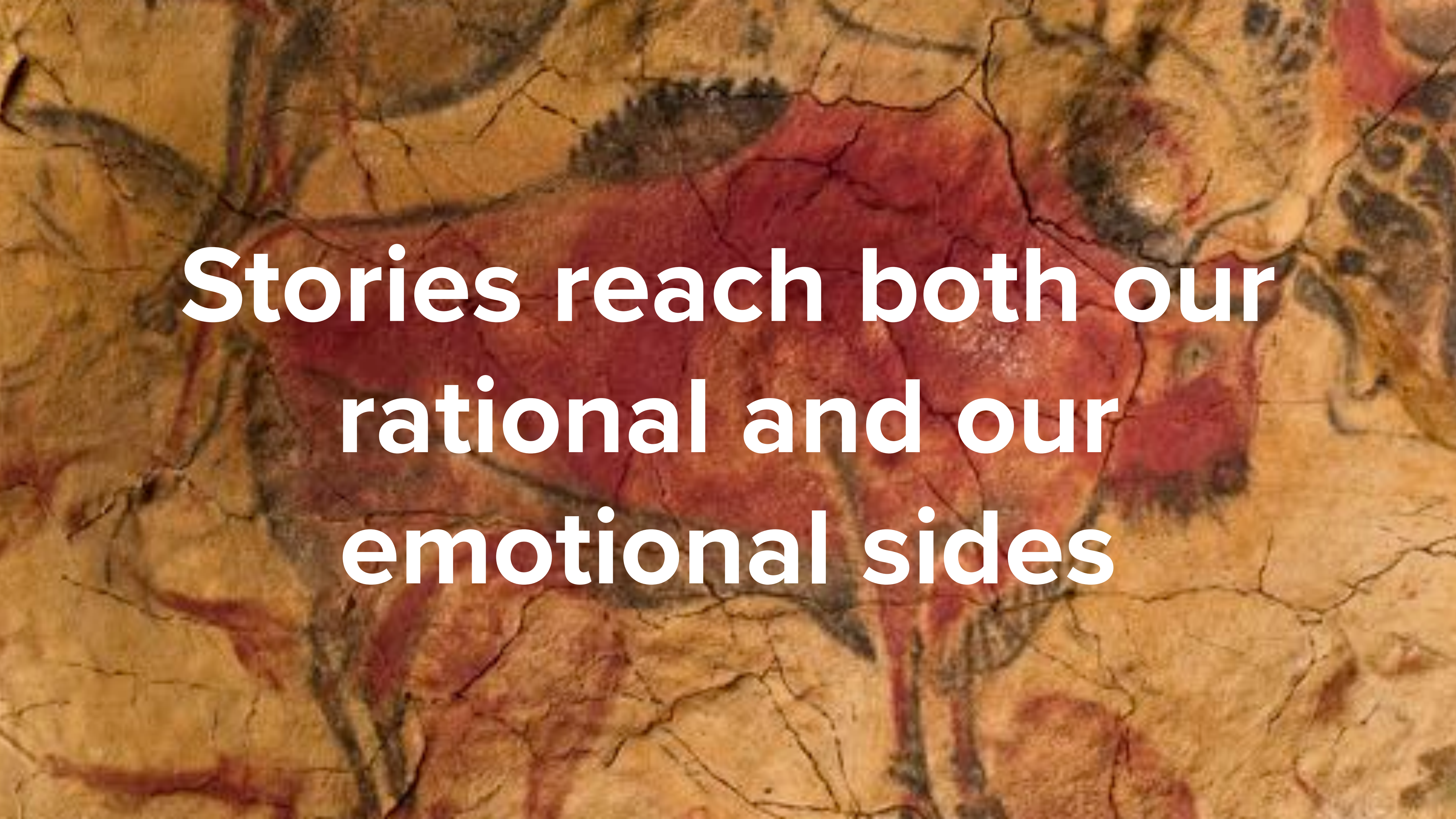
priorities: to whom I want to communicate?

relevance, motivation, attention: why should they care?

media: which is the most appropriate?

content: what do they know already? possible links, analogies, stories...?

HOW TO CREATE A STORY

The background is a piece of marbled paper with a complex, organic pattern. The colors range from light tan and beige to deep, dark reds and almost black tones. The pattern consists of irregular, vein-like shapes and spots, creating a rich, textured appearance. A prominent, irregular red shape is centered in the upper half of the image, partially overlapping the text.

**Stories reach both our
rational and our
emotional sides**

WHAT IS YOUR FAVORITE STORY?



Red Riding Hood

Her networking strategy, used as a platform for the mobile muffin business

Red's Mission

- Take home-made muffins to Grandma's house in woods that are suspiciously dark and gloomy and feature a notoriously evil wolf.
- Note: avoid the woodsman who stalks people and carries an axe.

Red's Time Allocation

Activity	Color
baking	Blue
walking	Yellow
talking	Red
consuming	Green

Areas for Improvement

- Don't get eaten by wolves
- Visit grandma more so that she is easily recognized as real grandma, not fake wolf-grandma
- Utilize Ziploc baggies for muffin freshness
- Write thank-you note to heroic-yet-still-creepy woodsman



Ingredients of a good story

To build a good story keep in mind that the media and non-experts in general are interested in the following:

Consequences: the impact of the discovery/application/research on society.

News / Novelty factor: whether it's a first, that is, it has never happened before, nor been witnessed or achieved.

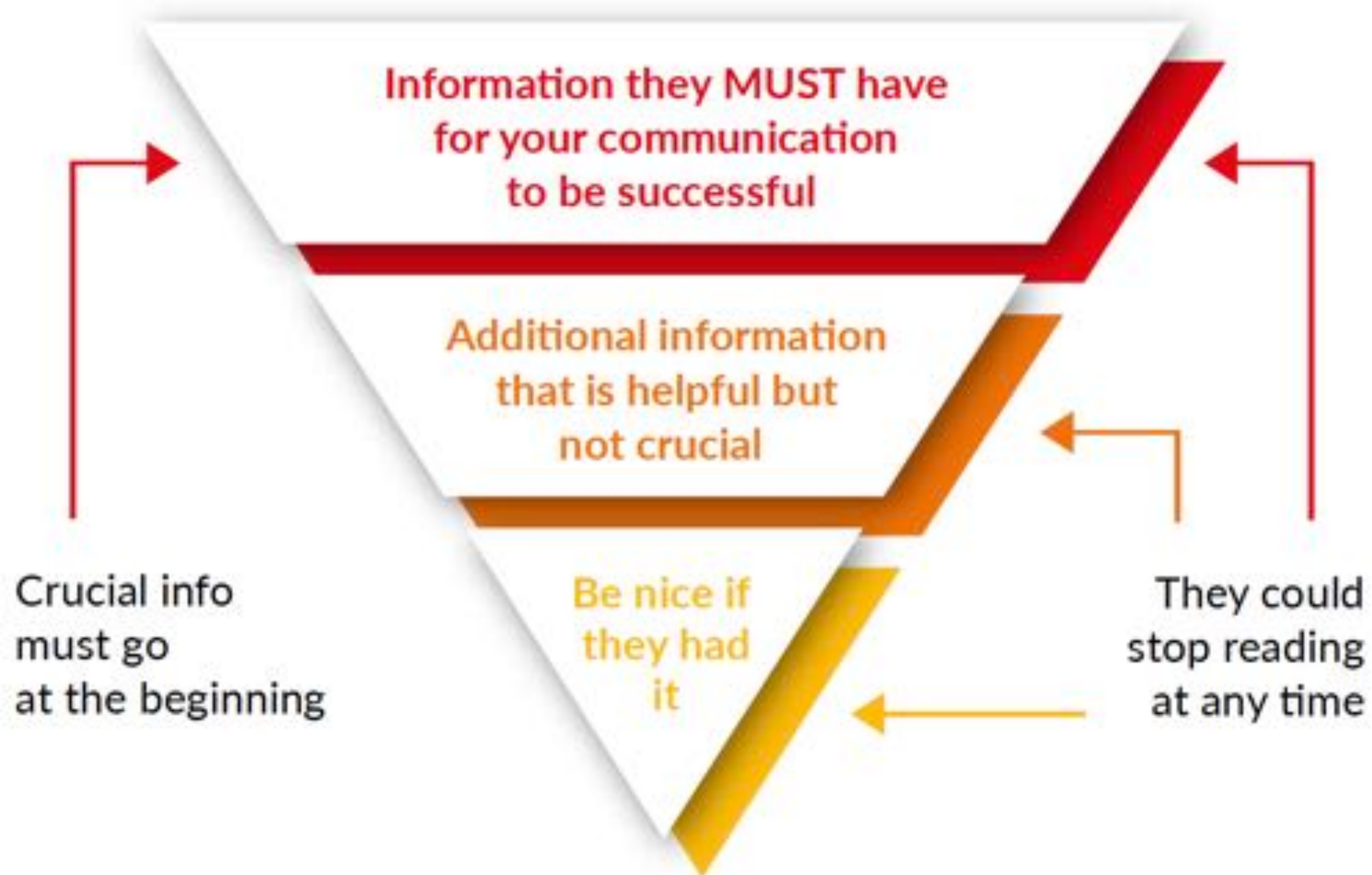
Change: how the research/application will affect our way of living, working, playing or our way of perceiving our surroundings.

Conflict: if there are alternative solutions/models (controversy is always interesting).

Record-breaking: something that's unique or that has been very difficult to observe, or is a record in size, length, duration, etc.

People: anything to do with real people, their lives and what they actually do.

The inverted pyramid



Science 7 May 2010: Vol. 328. no. 5979, pp. 710 - 722
DOI: 10.1126/science.1188021

Research Articles

A Draft Sequence of the Neandertal Genome

By Richard E. Green, et al.

Neandertals, the closest evolutionary relatives of present-day humans, lived in large parts of Europe and western Asia before disappearing 30,000 years ago. We present a draft sequence of the Neandertal genome composed of more than 4 billion nucleotides from three individuals. Comparisons of the Neandertal genome to the genomes of five present-day humans from different parts of the world identify a number of genomic regions that may have been affected by positive selection in ancestral modern humans, including genes involved in metabolism and in cognitive and skeletal development.

We show that Neandertals shared more genetic variants with present-day humans in Eurasia than with present-day humans in sub-Saharan Africa, suggesting that gene flow from Neandertals into the ancestors of non-Africans occurred before the divergence of Eurasian groups from each other.

New Scientist 19:00 06 May 2010

Neanderthal genome reveals interbreeding with humans

By Ewen Callaway

How closely are Neanderthals related to us? They are so closely related that some researchers group them and us as a single species. "I would see them as a form of humans that are a bit more different than humans are today, but not much," says Svante Pääbo, a paleogenetics at the Max Planck Institute in Leipzig, Germany, whose team sequenced the Neanderthal genome. The common ancestor of humans and Neanderthals lived in Africa around half a million years ago. After that, the ancestors of Neanderthals moved north and eventually made it to Europe and Asia. Our ancestors, meanwhile, stuck around Africa until about 100,000 years ago before eventually conquering the globe. Neanderthals died out around 28,000 years ago.

How did they sequence the Neanderthal genome? Bone contains DNA that survives long after an animal dies. (...)

Science reporter, BBC News

Page last updated at 18:02 GMT, Thursday, 6 May 2010 19:02 UK

Neanderthal genes 'survive in us'

By Paul Rincon

Many people alive today possess some Neanderthal ancestry, according to a landmark scientific study

The finding has surprised many experts, as previous genetic evidence suggested the Neanderthals made little or no contribution to our inheritance. The result comes from analysis of the Neanderthal genome – the "instruction manual" describing how these ancient humans were put together. Between 1% and 4% of the Eurasian human genome seems to come from Neanderthals. But the study confirms living humans overwhelmingly trace their ancestry to a small population of Africans who later spread out across the world. (...)



Image: © Neanderthal Museum (Mettmann, Germany)

THE METHOD

- ① Brainstorming
- ② Grouping
- ③ Storyboarding
- ④ Producing text
- ⑤ Producing visuals



Brainstorming

15 minutes

produce ideas, concepts, relations, emotions, etc.

each idea one sticky note

speak aloud

do not comment, judge, discuss, object

set inspiration from the ideas of the others

Grouping

Sustainable

10
gain

Different
methods

Difficult

ball?

Hot
&
Stea

Poll 1:

15 minutes

group the ideas according to the topic
something missing? and it
something useless or irrelevant? remove it

Storyboarding



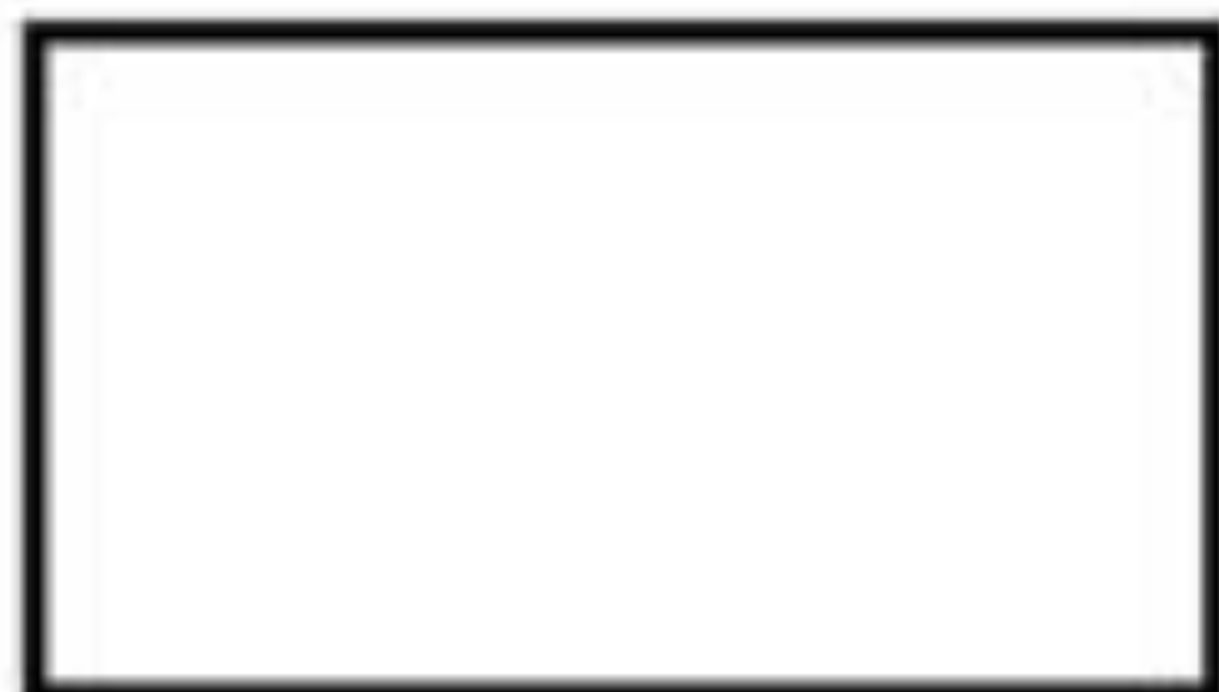
30 minutes

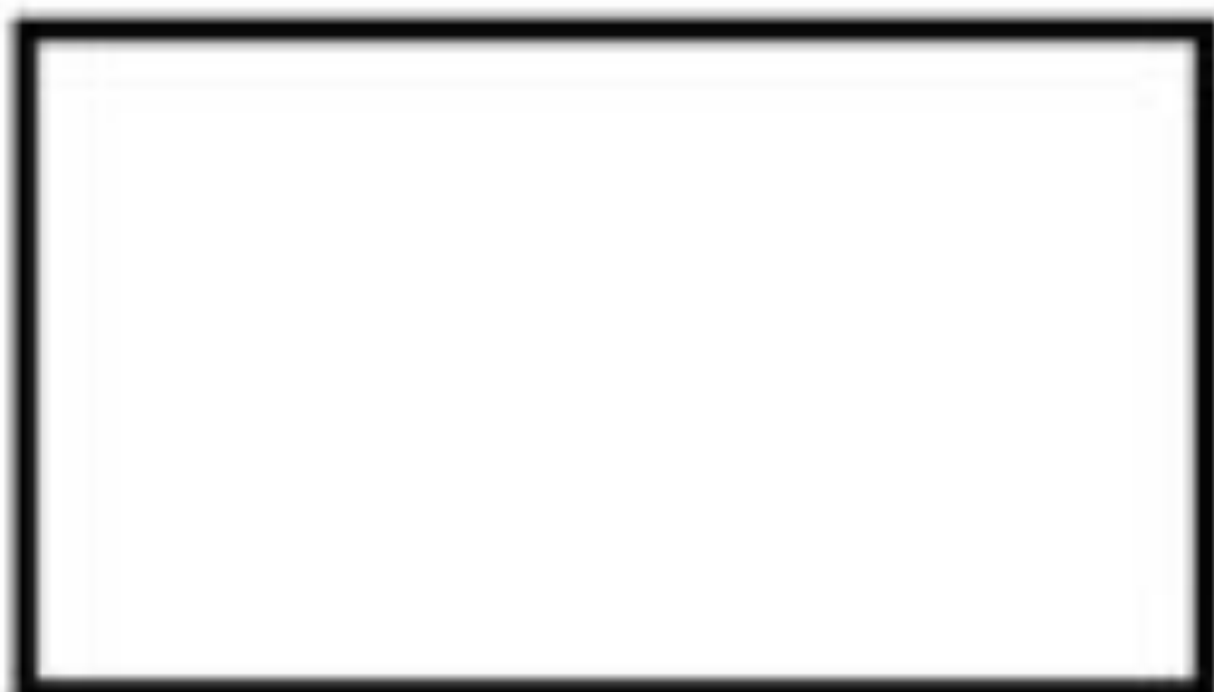
transform the arguments of the previous (Grouping)
phase into a linear story
each scene: an image and a text

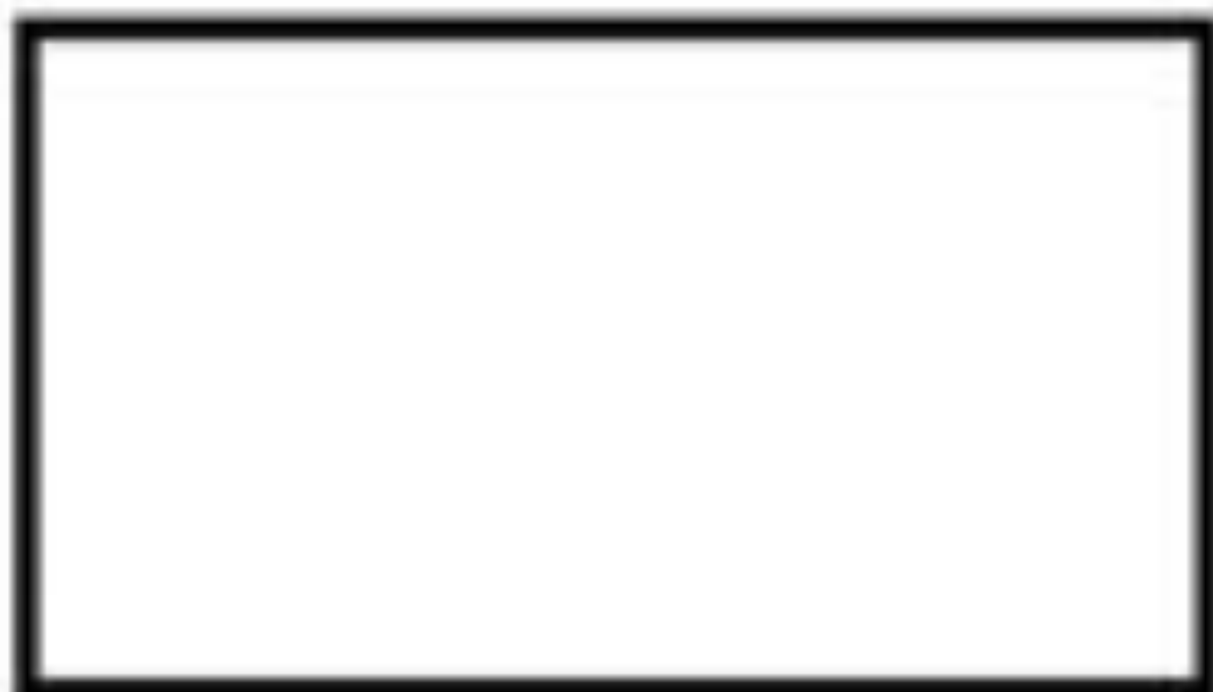
STORYBOARD

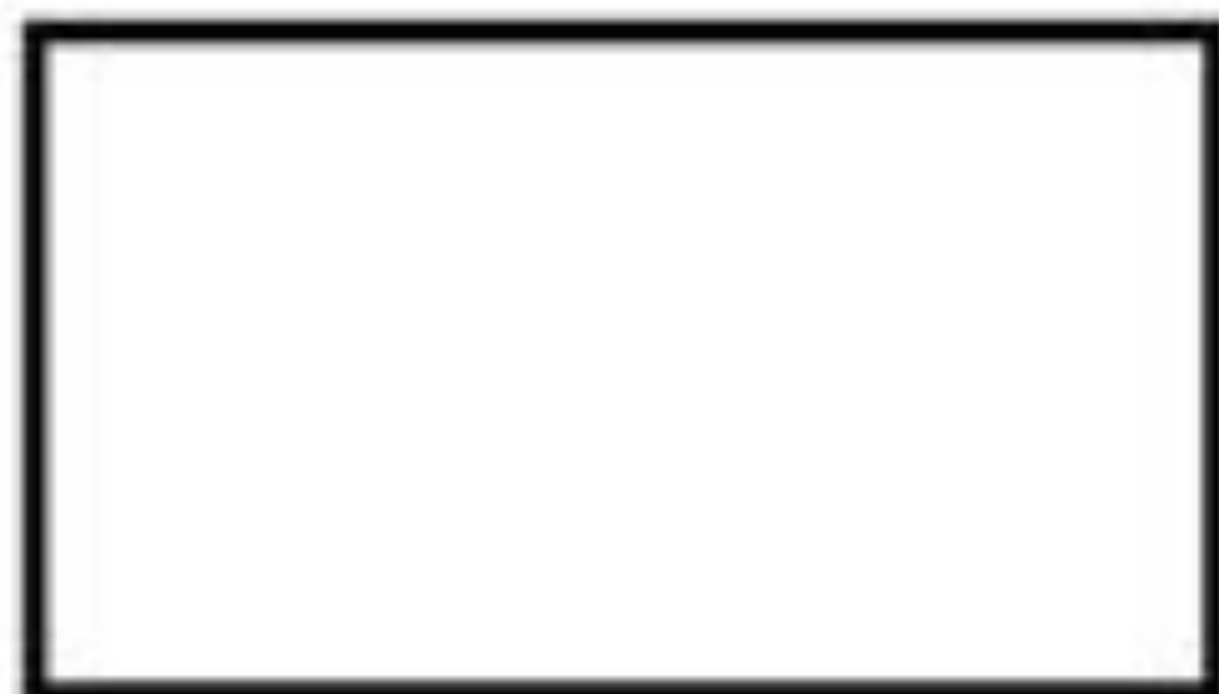
Production:

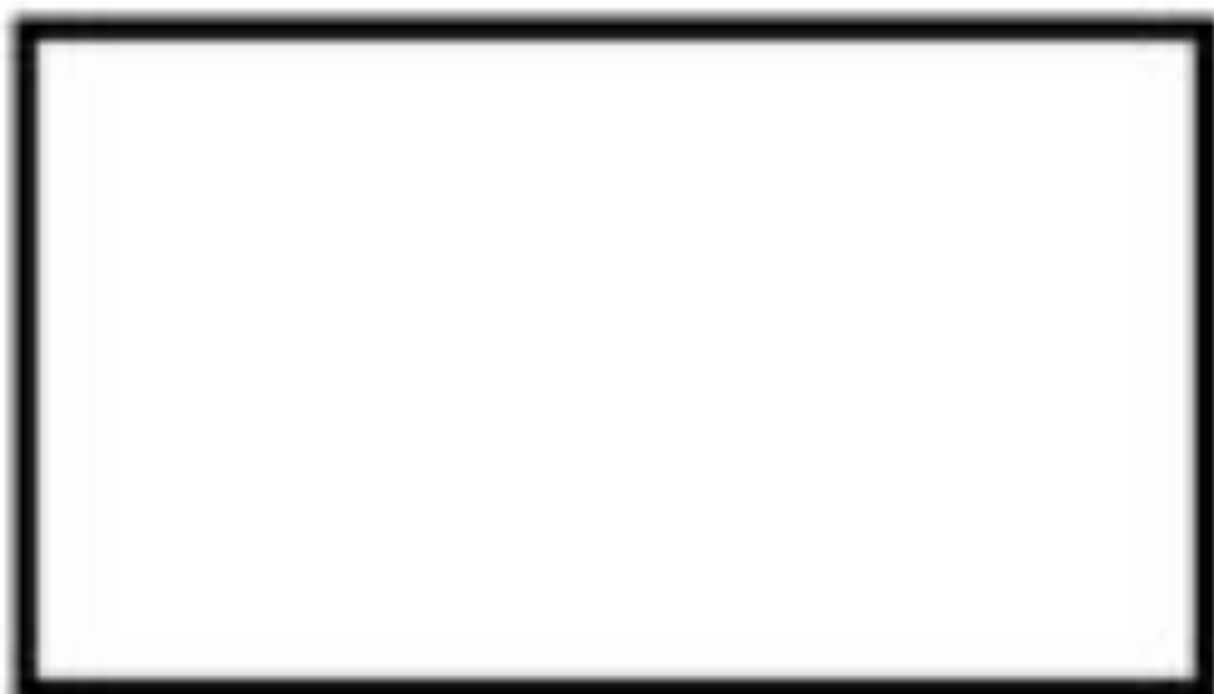
Date:













Jurassic Park - by David Lowery



TIGHT OVER TIM UP TO ROOF. REX AT FENCE
GOAT HANGING OUT OF ITS MOUTH.
THE REX SWALLOWS THE GOAT IN ONE BIG
GULP.



REGIS OPENS DOOR AND RUNS.



WIDE TO VEHICLES. REGIS RUNS PAST GRANT &
GERHARD IN SECOND VEHICLE



TIM & LEX LOOK OUT WINDOW TOWARD FENCE



OVER TIM & LEX AS THE FENCE IS PUSHED OVER.
TILT UP! THE SIGN IS HAMMERED AGAINST
THE DOHE.

31A



WIDE TO BOTH VEHICLES. THE T-REX TEARS
ITS WAY THRU THE FENCE WIRES AND...



THE T.REX STEPS OVER THE BARRIER ONTO THE
ROAD AND LOOKS DOWN AT BOTH
VEHICLES



REXS' FOOT INTO FOREGROUND.

Producing

Handwritten notes in red ink, possibly including the word "Hand" and other illegible scribbles.

Handwritten word "BANA" in red ink.

Handwritten word "MUDWIPAN" in red ink.

Handwritten symbol or character in red ink.

Handwritten word "TIDE" in red ink.



Handwritten blue ink symbol or character.

Handwritten notes on a yellow sticky note, including the words "Handwritten" and "Producing".

Handwritten notes on a white piece of paper, including the words "Producing" and "Handwritten".

30 minutes


use A4 sheets and markers to prepare the visual support

if you have objects, use them to facilitate the story

choose the spokesperson

rehears rehears rehears

Presenting

A man with dark hair and glasses, wearing a dark blue sweater and a blue and white striped scarf, is presenting. He is holding a whiteboard with a hand-drawn diagram. The diagram consists of a red circle with the number '1080' written inside in blue. Below the circle, the text '000 000 km/h' is written in blue. The man is gesturing with his right hand as he speaks.

1080
000 000 km/h