

**Best Practices in FYE Teaching**  
*Engaging Groups in a 1-credit FYE Seminar*

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## My UFSP 100 section

### *The Science of Storms, Climate Change, and Environmental Impacts*

- Mostly intended Atmospheric, Environmental, and Climate Science majors
- Introduces students to wide range of topics in our sciences

Severe weather

Weather forecasting

Climate change

Wildlife ecology and biodiversity

Paleoclimatology

Energy and sustainability

*etc...*

- Also tasked with:
  - University resources
  - Advisement
  - Other “get familiar with college” topics

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I have learned a lot from you all, at the FYE Workshop!

# Examples of engaging groups in my FYE seminar

## Social engagement

- End of class “speed-networking”

- Randomize groups of approx. 4 students

- “What do you like/not like about your hometown?”*

- “How is your living arrangement working out for you?”*

- “What is your most memorable weather experience?”*

- “Do you have any hidden talents?”*

- “Why are you taking this class?”*

- Switch groups before each new question

- (e.g., if you were born in the first half of the year, find a new group)*



# Examples of engaging groups in my FYE seminar

## Social engagement

- **ETEC Scavenger Hunt**

- Random groups of 4
- Take photos of each item, worth points
- Complete with 5 minutes left of class
- Winning team receives individual gift certificates (*thank you, Leah!*)

# • ETEC Scavenger Hunt

## Photo portion:

Take a photo of as many locations and items you can find on the list below.

- \_\_\_\_\_ Maker Space (1 pt)
- \_\_\_\_\_ Café (1 pt)
- \_\_\_\_\_ Name on an office door that contains the letter “Z” (1 pt)
- \_\_\_\_\_ New York State Mesonet Operations Center (1 pt)
- \_\_\_\_\_ Bike parking (1 pt)
- \_\_\_\_\_ Electric Vehicle charging station (1 pt)
- \_\_\_\_\_ Chemical shower in hallway (1 pt)
- \_\_\_\_\_ Boat (2 pts)
- \_\_\_\_\_ Another boat (2 pts)
- \_\_\_\_\_ LEED Platinum sign (2 pts)
- \_\_\_\_\_ An office with no name on the door (2 pts)
- \_\_\_\_\_ Coastal-Urban Environments Laboratory (2 pts)

- \_\_\_\_\_ A tree that is currently producing fruit (2 pts)
- \_\_\_\_\_ A different species of tree that is currently producing fruit (2 pts)
- \_\_\_\_\_ Row of lockers (2 pts)
- \_\_\_\_\_ Satellite dish (2 pts)
- \_\_\_\_\_ Stormwater basin (2 pts)
- \_\_\_\_\_ A flier advertising an upcoming seminar / event (2 pts)
- \_\_\_\_\_ A room with a radiation warning (2 pts)
- \_\_\_\_\_ Name on an office door that contains the letter “Q” (3 pts)
- \_\_\_\_\_ Outline of the State of New York (*not* on a digital screen) (3 pts)
- \_\_\_\_\_ Bird feeder (3 pts)
- \_\_\_\_\_ A huge hornet’s / wasp’s nest (4 pts)
- \_\_\_\_\_ A row of at least 7 identical vehicles (4 pts)

# Examples of engaging groups in my FYE seminar

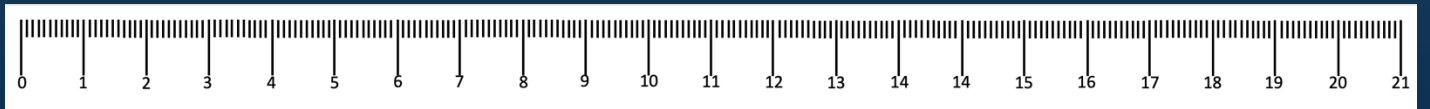
## Class-related engagement

- **Best practices of conducting and communicating science**
  - *Randomized groups of 4*
    - Measure a sheet of paper(!) (inspired by Youtube channel “Numberphile”)*

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## Class-related engagement

- **Best practices of conducting and communicating science**
  - Randomized groups of 4
    - Measure a sheet of paper(!) (inspired by Youtube channel “Numberphile”)*
  - Ask clear questions
  - Measure and analyze in proper units
  - Understand errors in data and instruments

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## Class-related engagement

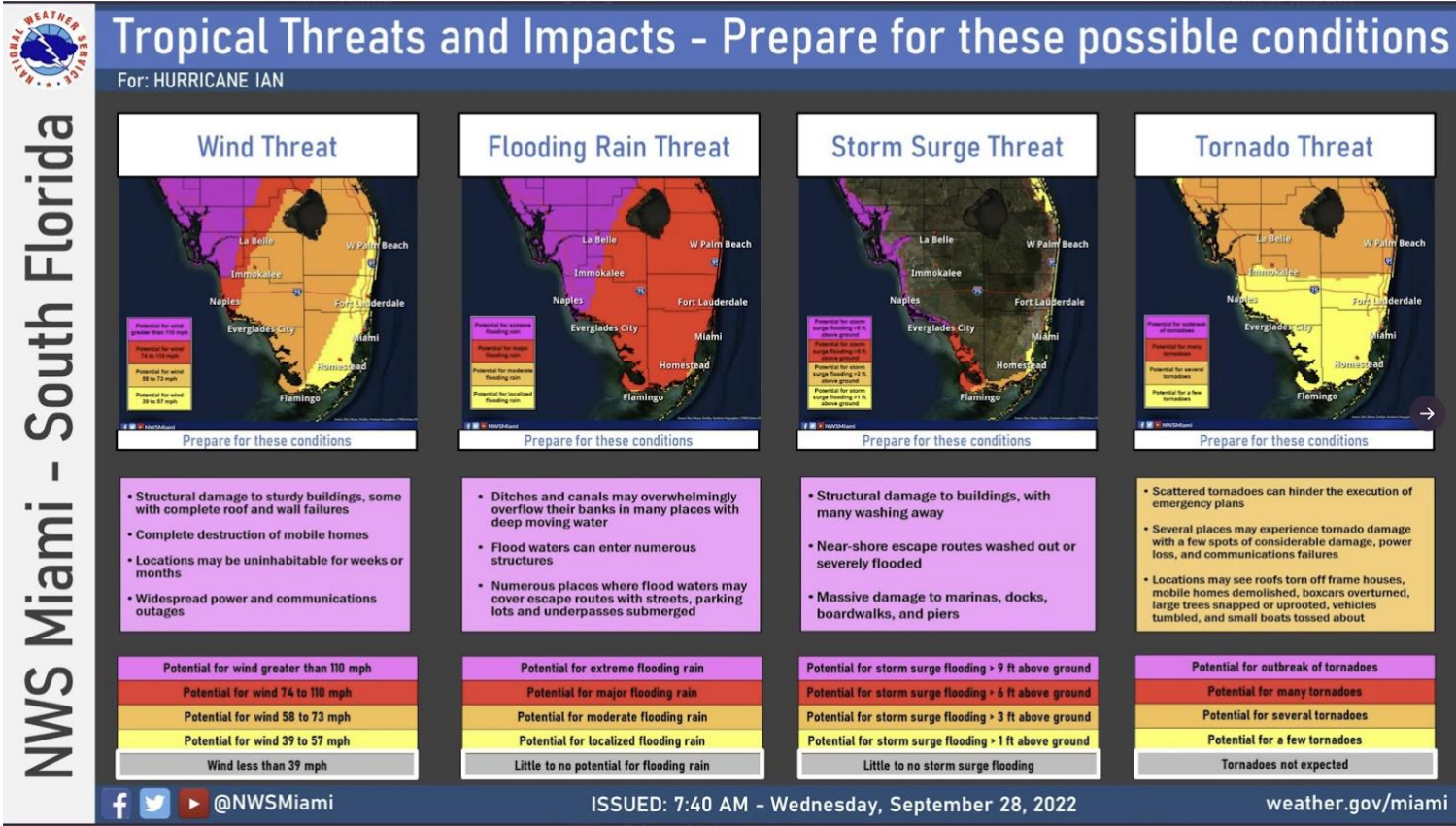
- **Clear, succinct, audience-tailored science communication**
  - *Random groups of 4*
  - *Distill a complex weather forecast graphic into a simple message for emergency managers*
  - *Google Form submission*

# Hurricane Ian - Forecast Communication

B I U ↶ ✕

Given the forecast graphic below, enter a **no more than two sentence** message you would convey to the emergency manager of the city of Naples, FL, in advance of Hurricane Ian.

Specific threats associated with Hurricane Ian, from the National Weather Service in Miami, FL





What is your **two-sentence message** you would convey to the emergency manager for the city of Naples, Florida, in advance of Hurricane Ian?

8 responses

There is a high chance for over 110mph winds that will be very destructive and the residents in southern Florida and all along the east and west coast should evacuate immediately. Because of these strong winds there is a very good chance of severe storm surges, flooding, and high chance of widespread tornadoes which is why people need to be evacuating immediately before the storm hits shore.

There will be extreme flooding and storm surge. It will also be very windy, but tornadoes are not a serious tornado threat.

Wind speed probabilities between 74-110 mph with potential for scattered tornadoes. Potential for extreme flooding from high amounts of rain as well as storm surges well over 9 feet above ground.

While there is not a high threat for strong Tornadoes, here is a high potential for storm surge over 9 ft, extreme flooding rains with winds greater 110mph. Be prepared for structural damage to homes, major water damage; evacuate if possible, and be prepared for destruction of mobile homes by strong winds.

The city of Naples will experience catastrophic storm surge and flooding rain, as well as extreme winds. A tornado threat is present, and evacuation is highly encouraged as there is extreme threat to life and property.



# Examples of engaging groups in my FYE seminar

## Class-related engagement

- **Weather and climate observation**

- First, discuss topic*
- Pass out simple instruments*
- In randomized groups, measure temperature and pressure at:*
  - Ground level*
  - Rooftop observation deck of Mohawk Tower (Indigenous Quad)*
- Discussion of results*



## Final thoughts...

- There are ways to bring course content and group engagement together!
- Use our beautiful and interesting campus as your classroom
- Be creative; FYE is a great opportunity to try new things
  - Be honest with your class that you are trying something new!*
- Have fun with your class
  - First semester of college is a very challenging transition for many students*
  - Leading an engaging, supportive environment where they get to know **each other**, and **you** is just as important as teaching the topics.*

If time, happy to answer questions!