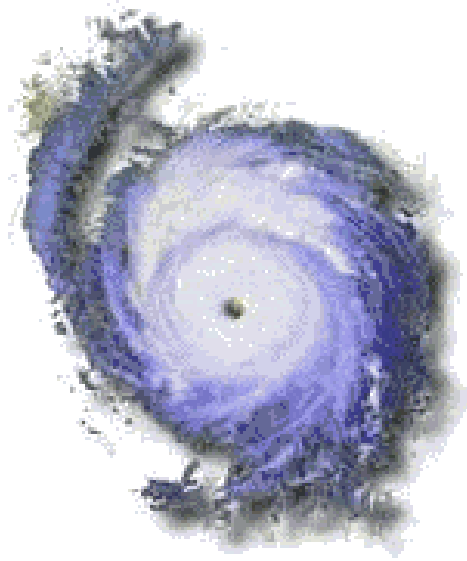


Ch. 20.3: Hurricanes



Objective: Be able to...

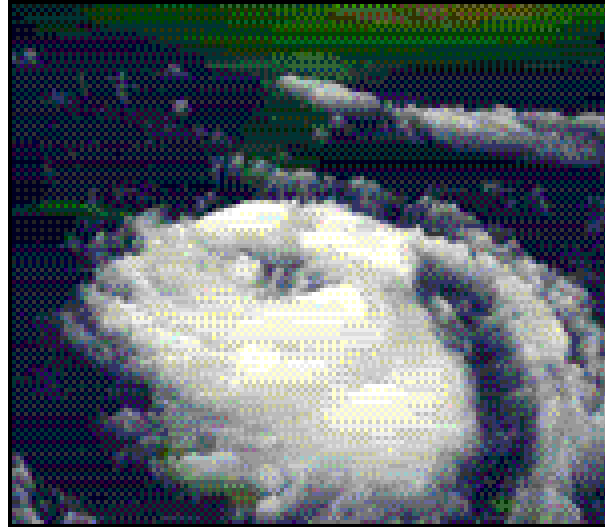
Identify the scale used to determine the strength of hurricanes.

Identify how hurricanes are born and die.

Define a hurricane.

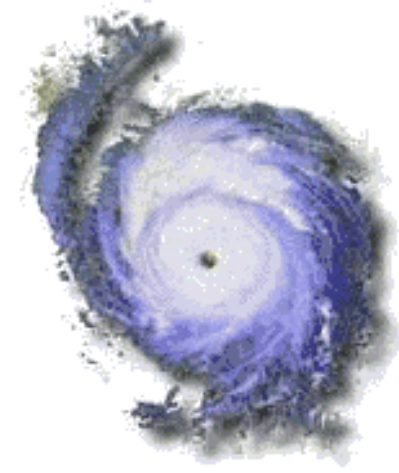
What is a hurricane?

- Type of cyclone (*low pressure center*)
 - *No fronts, only warm humid air.*
- Most destructive storms on earth.



What must the wind speed be at least to be a hurricane?

- Sustained winds of 74mph (*119 km per hour*) or greater



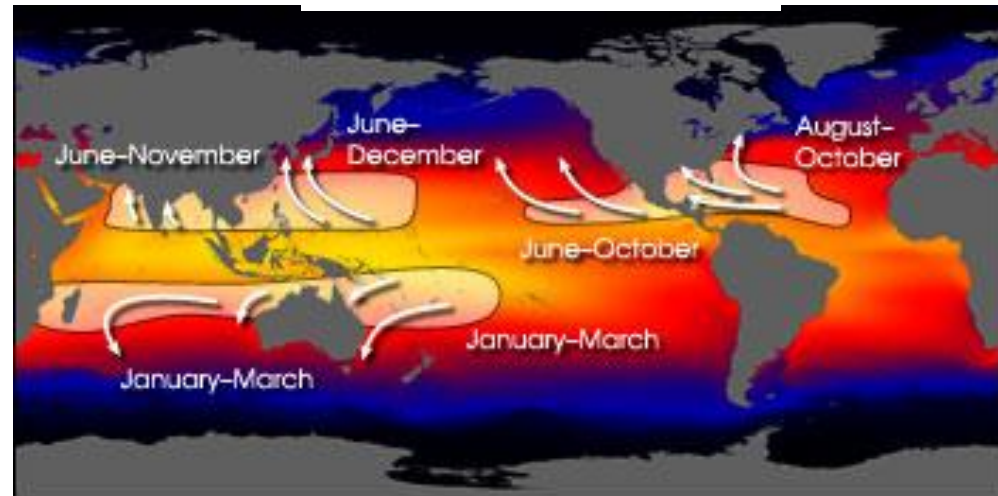
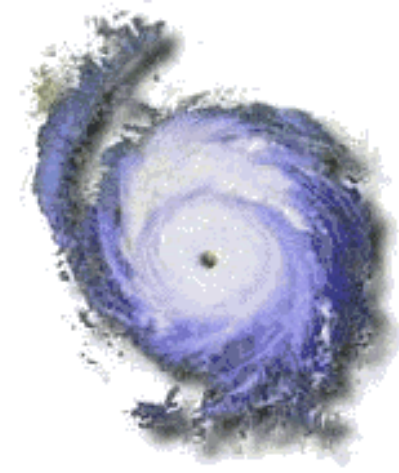
Which way do they spin?

- Spin counter-clockwise in the Northern Hemisphere.



Where do they form?

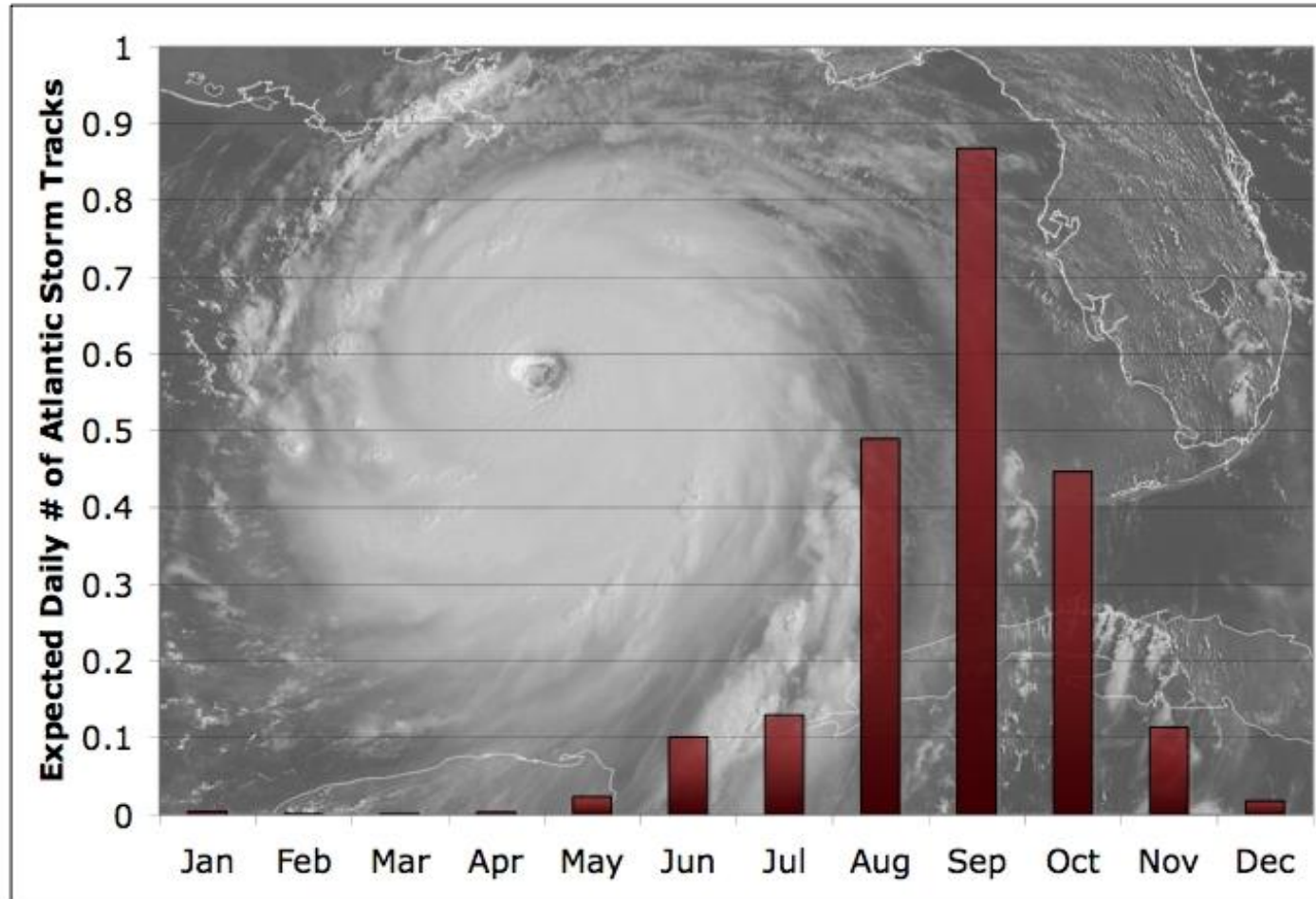
- Develop over warm tropical oceans.
- 5° to 20° (N or S) Latitude
- The ocean water itself must be warmer than ***80°F***.



Sea Surface Temperature ($^{\circ}\text{C}$)



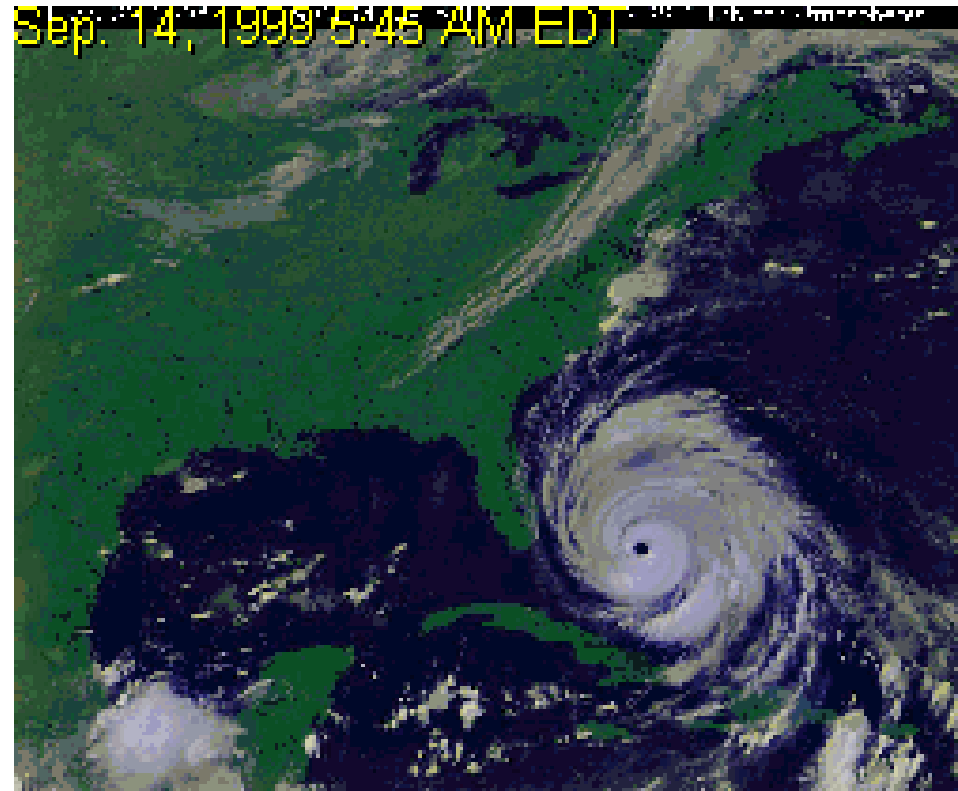
When is Hurricane Season?



- Hurricane season is from June to November.
- Peak of hurricane season is late summer.

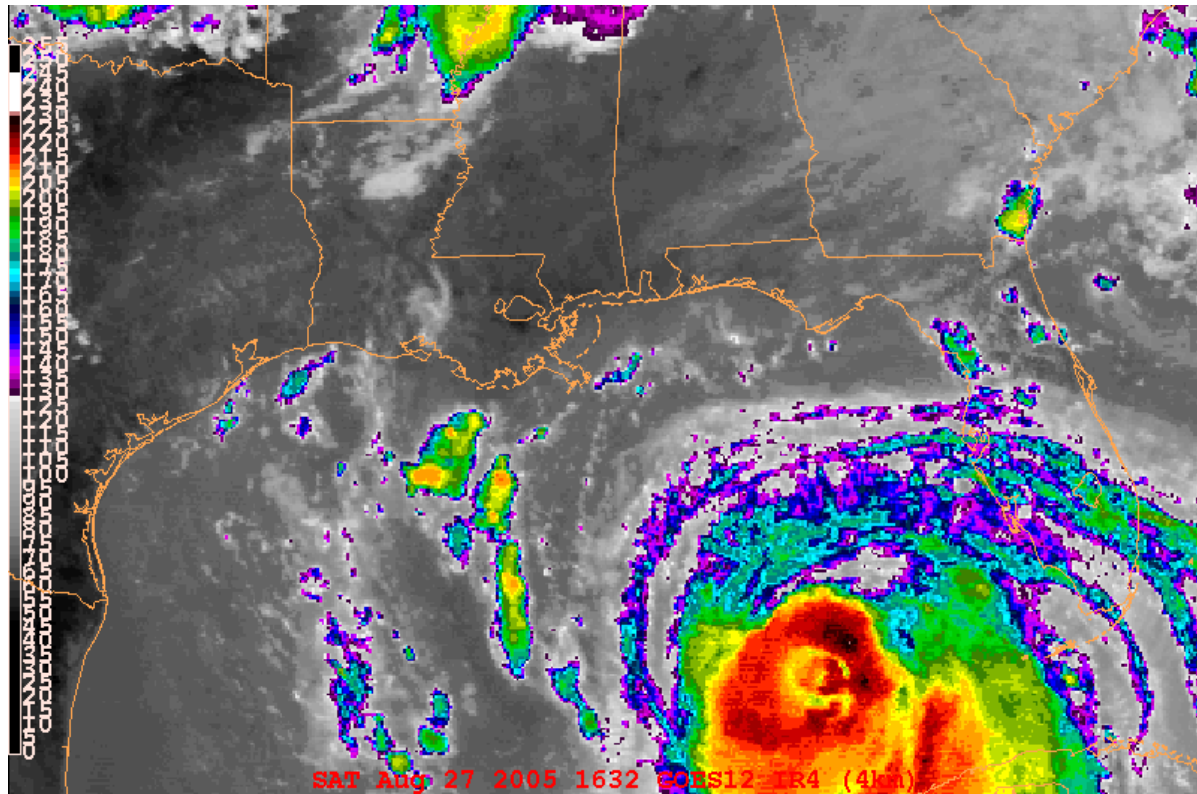
Identify what is going on in the eye of a hurricane?

- The center of a hurricane is called the *eye*.
- The eye itself is a region of calm, clear, warm, and sinking air.
 - *Not zero wind.*

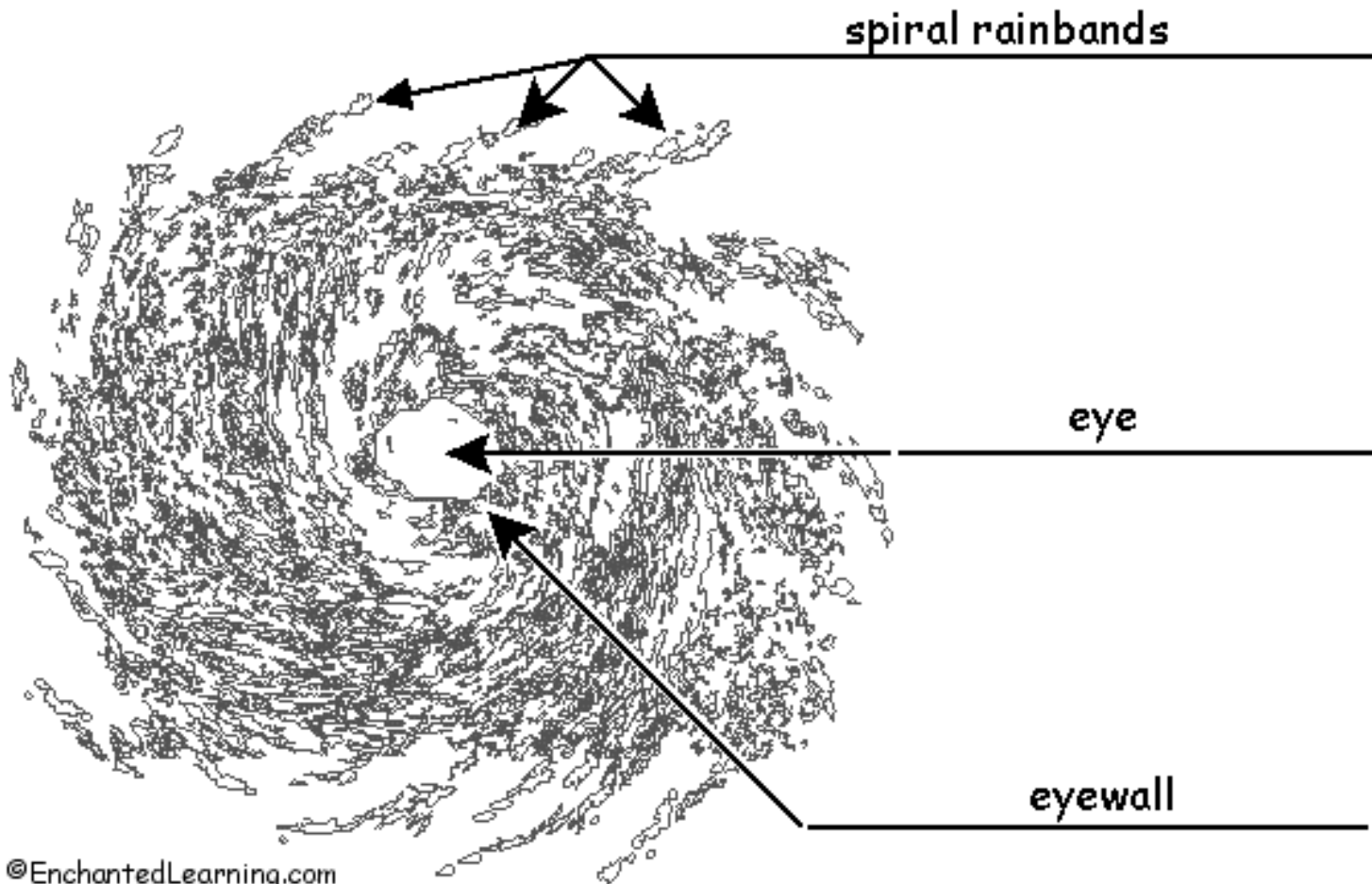


Where are the fastest winds in the hurricane found?

- The fastest winds are found at the *eyewall*.
 - *The eyewall is found around the eye.*



Parts of a hurricane



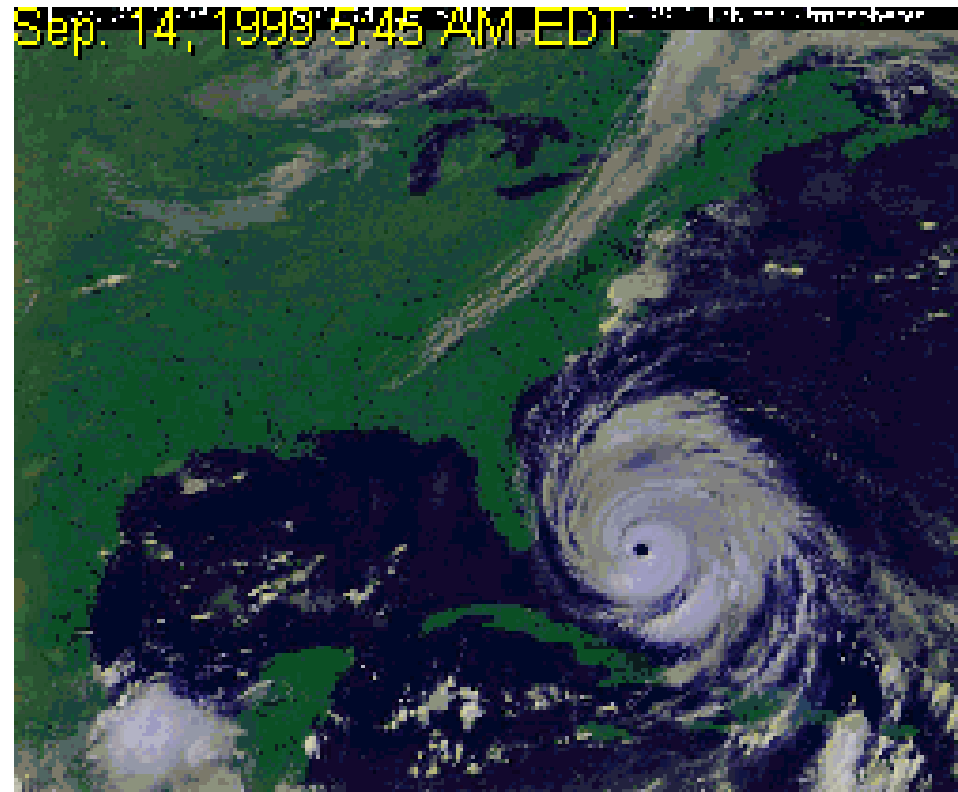
How do hurricanes cause damage?

- Hurricanes cause damage three ways.
 - Strong winds
 - Heavy rains
 - Storm Surge
- *Storm surge is the worst for destruction and deaths.*



When will a hurricane weaken?

- Hurricanes will weaken rapidly when they
 - travel over land
 - travel over colder ocean waters
 - lack of moisture



The scale used to measure the strength of hurricanes?

Saffir-Simpson Scale for Hurricane Classification				
Strength	Wind Speed (Kts)	Wind Speed (MPH)	Pressure (Millibars)	Pressure
Category 1	64- 82 kts	74- 95 mph	>980 mb	28.94 "Hg
Category 2	83- 95 kts	96-110 mph	965-979 mb	28.50-28.91 "Hg
Category 3	96-113 kts	111-130 mph	945-964 mb	27.91-28.47 "Hg
Category 4	114-135 kts	131-155 mph	920-944 mb	27.17-27.88 "Hg
Category 5	>135 kts	>155 mph	919 mb	27.16 "Hg
Tropical Cyclone Classification				
Tropical Depression		20-34kts		
Tropical Storm		35-63kts		
Hurricane		64+kts or 74+mph		

Atlantic Hurricane Names

2012	2013	2014	2015	2016	2017
Alberto	Andrea	Arthur	Ana	Alex	Arlene
Beryl	Barry	Bertha	Bill	Bonnie	Bret
Chris	Chantal	Cristobal	Claudette	Colin	Cindy
Debby	Dorian	Dolly	Danny	Danielle	Don
Ernesto	Erin	Edouard	Erika	Earl	Emily
Florence	Fernand	Fay	Fred	Fiona	Franklin
Gordon	Gabrielle	Gonzalo	Grace	Gaston	Gert
Helene	Humberto	Hanna	Henri	Hermine	Harvey
Isaac	Ingrid	Isaias	Ida	Ian	Irma
Joyce	Jerry	Josephine	Joaquin	Julia	Jose
Kirk	Karen	Kyle	Kate	Karl	Katia
Leslie	Lorenzo	Laura	Larry	Lisa	Lee
Michael	Melissa	Marco	Mindy	Matthew	Maria
Nadine	Nestor	Nana	Nicholas	Nicole	Nate
Oscar	Olga	Omar	Odette	Otto	Ophelia
Patty	Pablo	Paulette	Peter	Paula	Philippe
Rafael	Rebekah	Rene	Rose	Richard	Rina
Sandy	Sebastien	Sally	Sam	Shary	Sean
Tony	Tanya	Teddy	Teresa	Tobias	Tammy
Valerie	Van	Vicky	Victor	Virginie	Vince
William	Wendy	Wilfred	Wanda	Walter	Whitney