## Development of the Teenage Brain

Top

hearing

~Teenage behavior makes sense because the human brain develops from the bottom up, and from the back to the front

speech

smell

memory processing

**Amygdala** 

**Detects emotions** 

Reacts to stress

Detects fear/danger Prepares for survival

hear

eathing.

Stores memories of emotions

making

decision

**Prefrontal Cortex** 

Front

UNDER

**CONSTRUCTION!** 

**Executive functioning** 

Learning from mistakes

\*Strengthens until mid-20's

Thinking before acting

Perspective-taking

Learning new skills

\*Develops last

Impulse-control

Critical thinking

Logic

## Can't see long-term consequences Influenced by emotions Sensation-seeking Impulsive - act before thinking Invincibility - "Not me!" High importance of/to peers Ego-centric and self-focused Difficulty seeing the perspective of others <u>Hypothalamus</u> touch Releases hormones Connected to pituitary gland taste vision The Emotional **Brain** AKA the Limbic System Behavioral responses **Emotional responses** Influences hormones Regulates nervous system movemen coordination Back

Adolescent Thinking Patterns

Drawn toward risk-taking behavior

Reward center

Pleasure and gratification

Risk-taking

\*Influenced by emotion

**Nucleus Accumbens** 

\*Reacts before the Prefrontal Cortex

Encourage critical thinking

**Supportive Adults** 

Show empathy

Show concern

Stay calm

Connect feelings actions consequences

Avoid lectures and criticisms

Respond consistently

Teach learning how to think before acting

Increase ability to handle stress

Encourage involvement in activities

Create opportunities to grow their PFC

References: Understanding the Adolescent Brain - Brown School Online Lecture, 2020
Brain Changes During Adolescence, Khan Academy, 2015 - https://www.youtube.com/watch?v=5Fa8U6BkhNo
The Adolescent Brain, Dan Siegel, 2018 - https://www.youtube.com/watch?v=001u50Ec5eY