CELL PHONES

Reading 2

SKILLS:

- Details
- Paraphrasing

Getting started:

Have you ever had an accident with a cellphone?

THE SCIENCE BEHIND EXPLODING CELL PHONES

Over the years, we have heard stories of how someone's phone exploded, caught fire, or injured a user. For example, in 2021, an Alaska Airlines plane was evacuated after a Galaxy A21 caught fire, and an Indian teen died after sudden spark from his phone caused a fire. Although the chances of your smartphone exploding are little, it's better to know the causes and ways to prevent such situations.

Causes

Reasons like manufacturing defect, processor overloading, and using third-party chargers may cause a smartphone to catch fire, but most of the time it has to do with the device's battery. Physical damage to the battery can also lead to short-circuit. Besides, excessive heat and **overcharging** can cause the batteries to explode.

LIVEWORKSHEETS

The cells of Lithium-ion batteries used in phones and other devices have a critical temperature, like a boiling point. When that temperature is crossed, whether due to **overcharging** or external heat, the battery undergoes an exothermic breakdown. A chain reaction called thermal runaway releases more heat, and the phone eventually breaks down, catches fire, or explodes in some cases.

Be careful

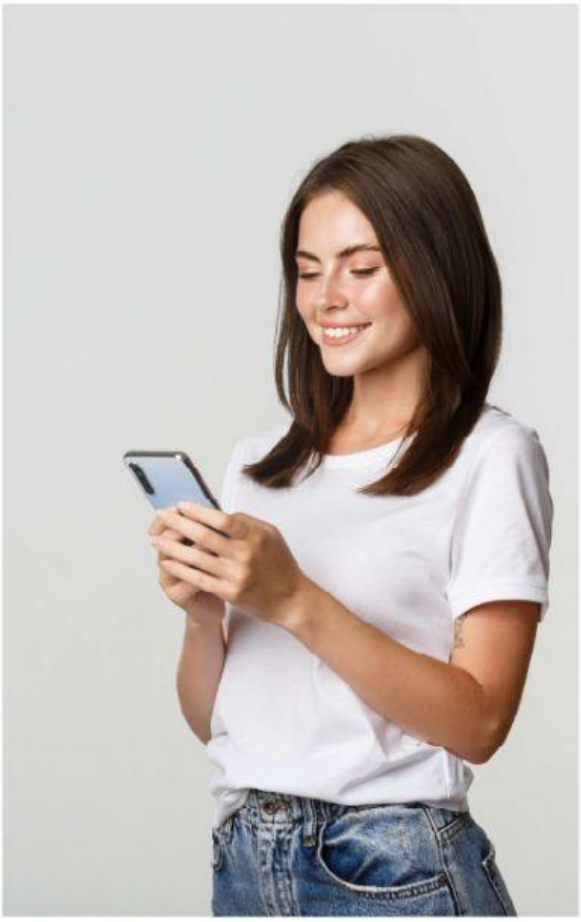
If your smartphone emits the smell of burning plastic, or you hear popping sounds, or if you feel it's hotter than usual, or you see a back panel, then you have to quickly turn off your cell phone and remove any external power supply.

The phone should be kept away from flammable objects. Once it has cooled down, you can get it checked at a service center.

**Adapted from https://www.newsbytesapp.com/news/science/what-causes-explosion-in-smartphones/story*

Glossary:

- **Overcharge:** To keep your cell phone connected even if the battery capacity is already full (100%).



LIVEWORKSHEETS

Complete the following sentences so that the information is the same as in the text. Do NOT use more than ONE word in each gap.

1. Users have been _____ due to cell phone explosions.

2. A Galaxy A21 caught fire, _____ the airplane was evacuated immediately.

3. It's not common that a cell phone explodes. _____, it's important to know how to prevent such a situation.

4. Phone _____ have a temperature limit that shouldn't be exceeded.

5. If your cell phone or charger is getting hotter than usual, you _____ turn it off instantly.

Language Note - Present Perfect

Over the years, we **have heard** stories of how someone's phone exploded.

Structure:
Have/has + V-past participle
Present perfect continuous: have/has + been + V-ing

We use the present perfect to describe past events that are linked to the present, especially experiences that started in the past and may continue in the present.

- I **have lived** in this neighborhood for twenty years.
- Carol **has traveled** to Europe several times.
- **Have** you ever **taken** dance lessons?

We use the present perfect to describe recent events. This is especially used in British English as in American English it is more common to use past simple.

- Neil **has lost** his keys.
- I**'ve** just **cut** my finger.

LIVEWORKSHEETS

Language Note - Present Perfect

We use the present perfect to describe activities done in a period of time that has not finished.

- They **have met** three times this month.
- I **have received** eight phone calls today.

To emphasize the duration or effect of an action, the present perfect continuous form is preferred.

- I'm exhausted! I'**ve been working out** for two hours.
- Facebook **has been operating** for 17 years.

What do you think?

What are some other dangers of using cell phones?

LIVEWORKSHEETS