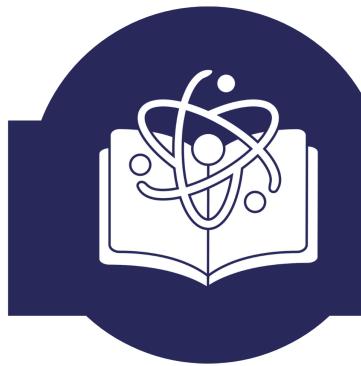


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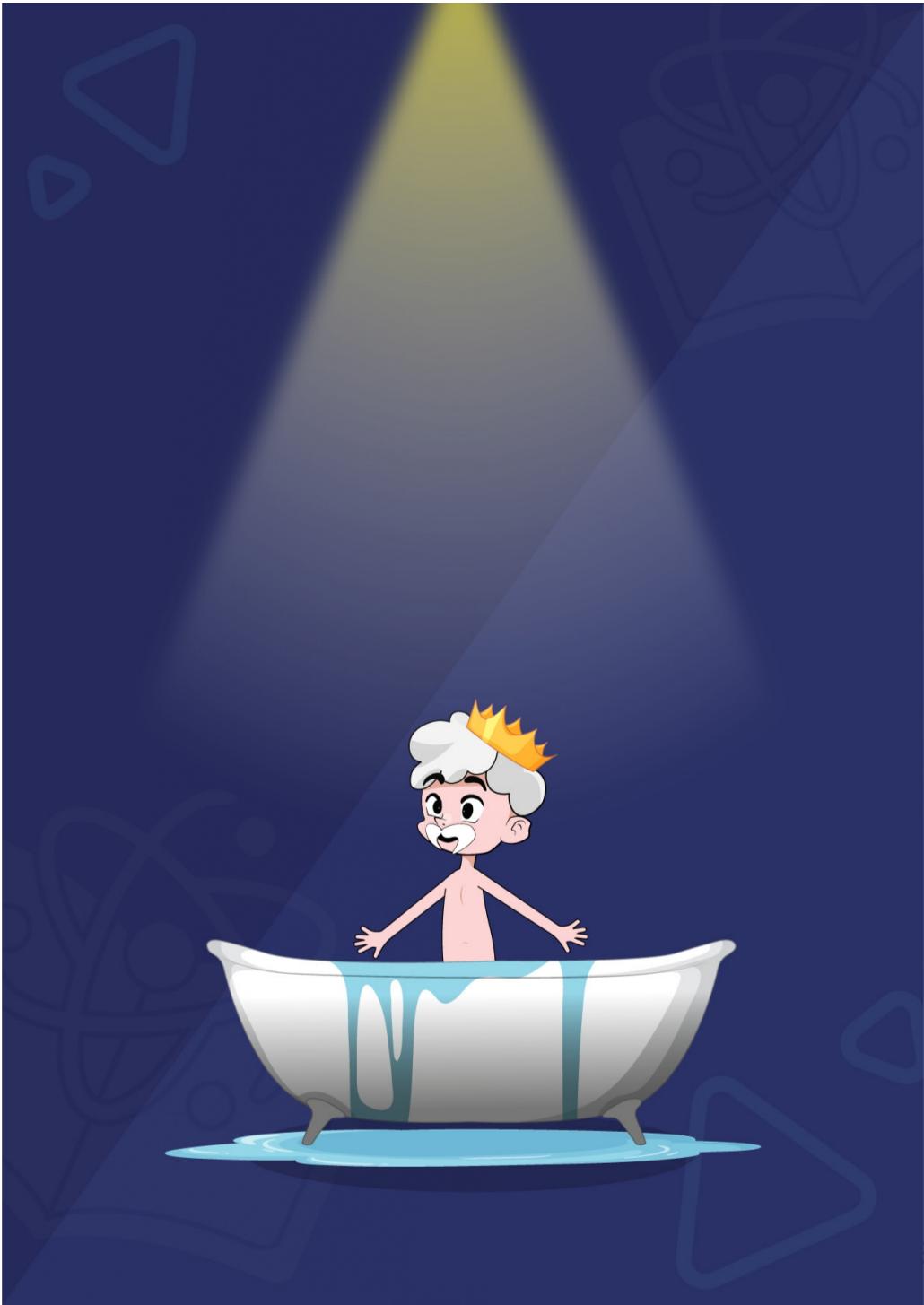


## ARPHYMEDES

**Dobrodošli nazaj! Smo pri četrtem  
glasilu projekta ARphymedes.**

**V zadnjih mesecih se je naše partnersko delo premaknilo na več  
področijih. Če se pomaknete navzdol, boste našli že dostopne novice.**

**Ste radovedni?**



## Prvi pogled v knjigo za učence

Cilj projekta Arphymedes je oblikovati **nova izobraževalna orodja**, ki bodo vključevala inovacije, ki jih je prinesel nedavni znanstveni in tehnološki razvoj, s čimer bo pristop k učenju postal bolj **poglobljen** in interaktivnen.

Učenje fizike morda nikoli več ne bo enako, saj bo v izvirno in tradicionalno knjigo vnesena **obogatena resničnost** (AR). Naš glavni cilj je narediti vsebine dostopne in dinamične.

**Pomaknite se navzdol** in **uživajte v prvih slikah** knjige za učence.

# Kaj nam prva različica ponuja?

Zaradi sodelovanja partnerjev si lahko ogledamo novo različico knjige za učence.

Knjiga bo pripovedovala o pomembnih mejnikih v **fiziki**, popeljala učenca na raziskovanje fizike skozi čas in pomembne dogodke, z možnostjo interaktivnega preizkušanja in eksperimentiranja s predstavljenim.

Skozi **zgodovino izumov** bomo prikazali poti in strategije znanstvenih odkritij ter poudarili pomen usvojenega znanja.

Oblikovana je bila jasna in preprosta postavitev, dvostranska struktura, zasnovana in zamišljena posebej za spremljanje branja vsebine do raziskovalnega potovanja skozi **AR**.

**Ključna je kombinacija**, ki bo izboljšala izobraževalno izkušnjo z vključevanjem medijev, aplikacij in obogatene resničnosti (AR) v pouk fizike.

The image shows a collage of six pages from the AR-enhanced physics book, illustrating various concepts through experiments and historical figures:

- Page 4:** Fluid mechanics is the study of fluids. It features a diagram of a mountain and a puddle of water, and a portrait of Blaise Pascal (1623-1662). A note says: "Low pressure = high pressure".
- Page 5:** Hydrodynamics. It features a portrait of Archimedes (287-212 BC) and a diagram of three spheres labeled "Water is the middle". A note says: "It rises, especially when under pressure. This is called hydrostatics. In motion, this is called hydrodynamics".
- Page 14:** Another page on fluid mechanics, featuring a portrait of David Benyamin (1760-1782) and a diagram of a hand holding a ball. A note says: "Fluids can be either liquids or gases. Let's start with some properties of fluids, and explore them doing the following experiments".
- Page 15:** A page on hydrostatics. It features a portrait of a scientist pouring water from a bottle into a glass, and a diagram of three jars of different sizes. A note says: "We pour water from bottle to glass, and it always goes straight down. This is what we do daily. But can we do the same with air? See how we can pour air from one jar to another. That's what we're going to do in this experiment".
- Page 16:** Another page on hydrostatics, featuring a diagram of a hydraulic jack. A note says: "Another important application in Hydrostatics is the hydraulic jack. Remember, pressure is force applied on an area. So, if we want to lift a heavy object, we need to apply a large force on a small area".
- Page 17:** A page on hydrostatics - Pascal's Law. It features a portrait of a scientist demonstrating Pascal's principle with a U-tube manometer. A note says: "If pressure in one point in an enclosed container increase, the pressure throughout the entire fluid also increases. This is true for liquids and gases".
- Page 18:** Another page on hydrostatics, featuring a diagram of a person filling a plastic bottle with water. A note says: "Later we observed was that when we fill the plastic's bottle with water, the water always goes straight up, no matter where we pour it".
- Page 19:** A page on hydrostatics, featuring a diagram of a person filling a plastic bottle with water. A note says: "As we can observe, the person who has a low pressure has a low density, and vice versa. Partially filled water bottle and their density is lower than the air density. That's why they have strength by pushing on the bottom".
- Page 20:** A page on hydrostatics, featuring a diagram of a person filling a plastic bottle with water. A note says: "Where water has higher density, the air pressure is higher. That's why we feel more pressure for the bigger or smaller springt".
- Page 21:** A page on hydrostatics, featuring a portrait of a scientist climbing a mountain. A note says: "So far, we have used Pascal's Law only in the case of liquids, mainly water. Does the same apply for gases? It is important to know, because we live in an ocean – at the bottom of the ocean of air. Since we live in an ocean of air, we experience pressure from all sides. That's why we feel pressure even when we go hiking in the mountains".
- Page 22:** A page on hydrostatics, featuring a portrait of a scientist climbing a mountain. A note says: "What happened to the plastic bottle when we climb the mountain? The air pressure is lower at the top of the mountain, so the bottle will expand. That's why it's the backpack. It's a compression zone".
- Page 23:** A page on hydrostatics, featuring a portrait of a scientist climbing a mountain. A note says: "Climbing up to high mountain areas, the pressure of the air decreases, the body needs to cope with the lack of oxygen in the lungs. There is an increase in breathing and heart rate to as much as three times. When you climb a high mountain, you feel like you are flying. You feel like you are flying in airplane clouds, you feel like the airplane lands on some cushion. The air is denser close to surface".

## Kaj nam prva različica ponuja?

Skupina ARphy se pripravlja na **mednarodno srečanje projekta** na Slovaškem, ki bo potekalo od 1. do 3. marca na University of Saints Cyril and Methodius v Trnavi.

To bo za konzorcij predstavljal dodatno priložnost, da skupaj deli trenutke za izmenjavo idej, delo, povezovanje in nadaljevanje naslednjih faz projekta.

Novosti in aktualne informacije bomo objavili v naših naslednjih glasilih.

## Spremljajte nadaljnje informacije in novice



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