

## Ni iki kiri muri iyi ndangamanota?

Iyi ndangamanota itanga inshamake y'ibyavuye mu mikorere y'abanyeshuri bawe kuri isuzumabumenyi rya leta, Isuzuma ry'Ubumenyi rya Maine. Ubumenyi bwa Maine Isuzuma rishingiye ku bumenyi bwa Maine na Engineering Standards, ni ukuvuga Next Generation Science Standards (NGSS). Isuzuma ry'ubumenyi bwa Maine rirakenewe ku Abanyeshuri bo mu mashuri ya leta ya Maine mu cyiciro cya 5, 8, n'umwaka wa 3 w'amashuri yisumbuye.

## Isuzuma ry'Ubumenyi rya Maine ni iki?

Isuzuma ry'Ubumenyi rya Maine ryibanda ku myigishirize myinshi hakubiyemo ubumenyi n'ubuhanga bushyizwe mu bikorwa ndetse n'ibitekerezo byimbitse by'ikinyabupfura. NGSS isobanura ubumenyi n'ubuhanga nk'ibikorwa abahanga bakora kugira ngo bakore iperereza ku isi. Ibitekerezo byimbitse by'ikinyabupfura n'ibitekerezo by'ingenzi bikubiye mu bumenyi kandi bishobora guhurizwa hamwe mu bumenyi bugaragara, ubumenyi k'ubuzima, n'Isi n'ubumenyi bw'ikirere.



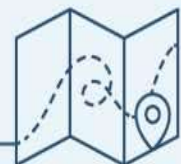
Kugira ngo urusheho gusobanukirwa neza n'ibyo umunyeshuri wawe azi kandi ashobora gukora bijyanye n'amanota urwego, amakuru yo muri iyi ndangamanota agomba gukoreshwa hamwe n'andi masoko, nk'isuzuma ry'ishuri hamwe n'ishuri ryo kwigiramo.

### Ibibazo ku Munyeshuri



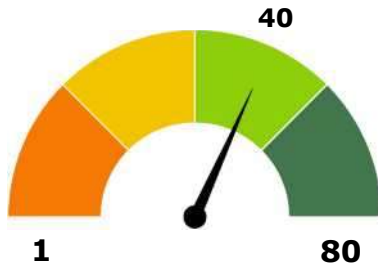
- Ni iki wiga mu ishuri ry'ubumenyi?
- Ni ikihe gice ukunda mu ishuri ry'ubumenyi?
- Ushobora gutekereza k'umurimo uwo ariwo wose ukoresha ubumenyi wifuza gukora mu gihe ukuze?

### Ibibazo kuri Mwarimu



- Ni iki umunyeshuri wanjye yiga mu cyiciro cya siyansi muri uyu mwaka?
- Ni gute nakoresha aya makuru kugira ngo nshyigikire neza imyigire y'umunyeshuri wanjye?
- Ni uwuhe mutungo uboneka mu baturage wo gushyigikira kwiga ubumenyi?

## Muri rusange Imikorere y'Ubumenyi bw'Abanyeshuri



### Kugereranya Imitsindire

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Amanota y'ibizamini by'abanyeshuri ashobora gutandukana. Niba umunyeshuri wawe yongeye gukora iki kizamini, birashoboka ko bari gutsinda amanota ari hagati ya 38 na 42

**Munsi y'Ibyo Leta Iteganijwe:** Ibikorwa by'abanyeshuri byerekana imyumvire muke y'ibitekerezo by'ingenzi muri siyansi. Ibisubizo by'abanyeshuri byerekana ubushobozi buke bwo gukemura ibibazo. Ibisobanuro ntabwo byumvikana, bituzuye, cyangwa kubura guhuza ibitekerezo hagati. Hariho byinshi bidahwitse.

**Munsi y'Ibiteganijwe muri Leta:** Ibikorwa by'abanyeshuri byerekana gusobanukirwa kutuzuye n'ibitekerezo by'ingenzi mu bumenyi no guhuza bidahuye n'ibitekerezo bikuru. Ibisubizo by'abanyeshuri byerekana ubushobozi bumwe bwo gusesengura no gukemura ibibazo, ariko ireme ry'ibisubizo ntirihuye. Ibisobanuro by'ibitekerezo bishobora kuba bituzuye cyangwa bidasobanutse.

**Mubiteganijwe na Leta:** Ibikorwa by'abanyeshuri byerekana gusobanukirwa bihagije imyumvire y'ingenzi mu bumenyi, harimo n'ubushobozi bwo guhuza ibitekerezo hagati. Ibisubizo by'abanyeshuri byerekana ubushobozi bwo gusesengura no gukemura ibibazo bisanzwe no gusobanura imyumvire yo hejuru hamwe bihagije bisobanutse kandi by'ukuri kugira ngo berekane imyumvire rusange.

**Hejuru y'Ibiteganijwe kuri Leta:** Ibikorwa by'abanyeshuri byerekana gusobanukirwa neza ibitekerezo by'ingenzi mu bumenyi, harimo n'ubushobozi bwo guhuza byinshi mu bitekerezo bikuru. Ibisubizo by'abanyeshuri byerekana ubushobozi bwo guhuza amakuru, gusesengura no gukemura ibibazo bikomeye, no gusobanura ibitekerezo bigoye ukoresheje ibimenyetso n'amagambo akwiye yo gushyigikira no gutanga imyanzuro yumvikana.

## Imitsindire rusange igizwe no gutsinda muri ibi bice bitatu:

### Imiterere na Ibintu by'Ingenzi



Ibi bigaragaza gutegura ingingo zibanda ku gufasha abanyeshuri gutangira gusobanukirwa no kubungabunga ibintu na kamere yabyo.

- Ikintu cy'ubwoko ubwo aribwo bwose gishobora kugabanywamo ibice bito cyane ku buryo bugaragara
- Iyo ibintu bibiri cyangwa byinshi bitandukanye bivanze, hashobora kubaho ibintu bishya bifite imitungo itandukanye ishobora gushingwa.
- Ibipimo by'imitungo itandukanye bishobora gukoreshwa kugira ngo umenye ibikoresho.
- Ingano (uburemere) y'ibintu irabikwa iyo ihinduye imiterere, ndetse no mu nzibacyuho iyo isa nkaho yazimye.

### Ibintu n'ingufu mu Binyabuzima n'Urusobe



Ibi bigaragaza gutegura ingingo zibanda ku gufasha abanyeshuri kubaka imyumvire y'imigendere n'inziga z'ibintu n'ingufu

- Ukuzunguruka kw'ibintu hagati y'ikirere n'ubutaka no mu bimera, inyamaswa, na mikorobe kuko ibyo binyabuzima bibaho kandi bipfa.
- Ibintu bigabanyijemo ibice uko bitamba hagati y'ibinyabuzima n'umwuka n'ubutaka.
- Ibimera bisaba ibikoresho byabyo kugira ngo bikure cyane cyane biva mu kirere n'amazi kandi ibiryo bitanga ku nyamaswa ibikoresho bakeneye byo gusana umubiri no gukura.
- Ingufu zasohotse mu biribwa zahoze ari ingufu ziva ku zuba zafashwe n'ibimera mu buryo bw'ubutabire bugize ibimera.

### Sisitemu y'Isi, Sisitemu y'Isanzure: Inyenyeri na Sisitemu y'Izuba



Ibi bigaragaza gutegura ingingo zibanda ku gufasha abanyeshuri kubaka imyumvire ya sisitemu nkuru y'Isi n'uburyo zikorana.

- Sisitemu nkuru y'isi ikora mu buryo bwinshi kugira ngo bigire ingaruka ku butaka bw'Isi no mu nzira.
- Sisitemu nkuru y'isi yibasiwe n'uburemere bwa imbaraga rukuru z'isi zikora ku kintu cyegereye isi ikurura icyo kintu kigana hagati y'isi.
- Ibikorwa by'abantu mu buhinzi, inganda, na ubuzima bwa buri muni byagize ingaruka zikomeye ku ubutaka, ibimera, imigezi, inyanja, n'ikirere.
- Hariho uburyo bugaragara buterwa no kuzenguruka isi kuzenguruka izuba, ukwezi kuzenguruka isi, no kuzenguruka isi hafi umurongo.