

PROJECT WORK ON THE MODEL WORK-BASED TRAINING PUD-BJ – FROM IDEA TO  
PRODUCT - EARLY DEPLOYMENT TECHNIQUE USING LEARNING MODELS THAT SHOW  
HOW THE TIRES FITTED INTO A SIMPLE TOYS, LEARNING TOOLS PRIMARY AND  
SECONDARY SCHOOLS

PROJEKTNO UČNO DELO PO MODELU PUD-BJ – OD IDEJE DO IZDELKA - ZGODNJE  
UVAJANJE V TEHNIKO S POMOČJO DIDAKTIČNEGA MODELA ZA PRIKAZ DELOVANJA  
PNEVMATIKE, VGRAJENE V PREPROSTIH IGRAČAH IN UČNIH PRIPOMOČKIH V  
OSNOVNIH IN SREDNJIH ŠOLAH

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**Abstract**

The purpose of our project is to present invention as a teaching aid in teaching techniques and technology to show the operation of the tire models, through experiential learning. Our work by model work-based training PUD-BJ – from concept to product is useful and dedicated to the general public in the context of early introduction of technology and vocational guidance, as a child in kindergarten, primary school pupils and future students at information days and technical days that take place in schools. The invention represents a simple way to know the model PUD-BJ – from idea to product, where you can learn about different models and techniques of machines with pneumatic operation and behavior of the basic physical and chemical and mechanical laws built with industrial elements. Such innovative offering designed model that we know better understanding of the subject matter with the scope of the teaching models of mechanics and mechatronics courses in engineering and technology and robotics modern times, the entire vertical of education – from kindergarten to university technical studies. Designed invention has great didactic value, as confirmed by a study group of teachers presented for illustrative way of effective presentation and interpretation and performance in the learning environment of basic physical, chemical, electrical and mechanical laws, on which work has already too many the toy makers and devices, to be used along the entire vertical of education – from kindergarten to university teaching both as a technical study. The project approach work models PUD-BJ – from idea to product, encouraging creative ideas in the early deployment of the technology, especially the mental development of children already in kindergarten, for pupils in elementary school and in high school students in choosing their career.

**Keywords:** *Models PUD-BJ, project work, from concept to product, pneumatic assemblies early introduction to technology, interdisciplinary integration, intergenerational integration*

**Abstrakt**

Namen našega projektne delo je predstaviti izum kot didaktični pripomoček pri pouku tehnike in tehnologije za prikaz delovanja modelov pnevmatike s pomočjo izkušenskega učenja.

Naš model PUD-BJ – od ideje do izdelka je uporaben in namenjen širši javnosti v okviru zgodnjega uvajanja v tehniko in pri poklicnem usmerjanju, tako otrokom v vrtcih in učencem v osnovnih šolah kot bodočim dijakom na informativnih dnevih in tehniških dnevih, ki potekajo na šolah.

Izum predstavlja enostavno pot do znanja po modelu PUD-BJ – od ideje do izdelka, kjer lahko spoznavamo različne modele in tehnike delovanja strojev s pnevmatičnim delovanjem ter obnašanje osnovnih fizikalnih in kemičnih ter mehanskih zakonov z industrijskimi vgrajenimi elementi.

Tako inovativni zasnovan model ponuja spoznavanje boljšega razumevanja učne snovi s področja delovanja učnih modelov mehanike in mehatronike pri predmetih tehnike in tehnologije ter robotike sodobnega časa na celotni vertikali šolanja – od vrtca do univerzitetnega tehniškega študija.

Izdelani izum je velike didaktične vrednosti, kot je potrdila študijska skupina učiteljev, predstavljene so nazorne poti od učinkovitega prikaza in razlage ter predstave v učnem okolju osnovnih fizikalnih, kemičnih, električnih in mehanskih zakonitostih, na katerih delujejo tudi že mnoge igrače, strojčki in naprave, ki se uporabljajo na celotni vertikali šolanja – od vrtca do univerzitetnega (tako pedagoškega kot tehniškega) študija.

S projektnimi pristopi dela modelov PUD-BJ – od ideje do izdelka spodbujamo kreativne ideje v zgodnje uvajanje v tehniko, predvsem pa miselni razvoj otrok že v vrtcih, pri učencih v osnovni šoli ter pri dijakih pri izbiri svoje poklicne poti.

**Ključová slova:** *Modeli PUD-BJ, projektno delo, od ideje do izdelka, pnevmatski sklopi, zgodnje uvajanje v tehniko, medpredmetno povezovanje, medgeneracijsko povezovanje*

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