

Vigyan Ashram Status Report

Volume 43 Issue 2

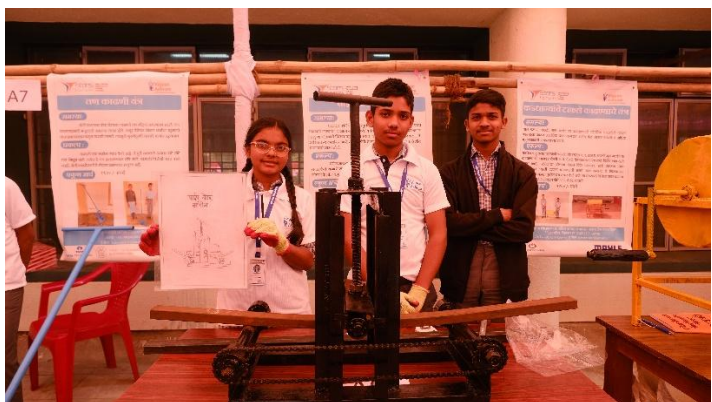
February 2026

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A] Technovation Exhibition 2025-26 @ JP Naik Centre

The project exhibition of IBT projects and demonstration of projects done from Grade 6-8th as per new vocational text book 'Koushal Bodh' published by NCERT was held on 24th February at J. P. Naik Centre for Education and Development, Kothrud, Pune. Students from 38 schools across Maharashtra (Grade 6 to 10) participated enthusiastically, showcasing a wide range of exhibits reflecting their hands-on learning in areas such as woodworking, metal fabrication, agriculture, and digital technologies. These schools are implementing vocational education programs as NEP 2020 and SCF 2024 with technical support of Vigyan Ashram and STARS Forum.



Total 39 Students projects qualified for the Technovation competition. They were evaluated by independent jury members team. Four students team were awarded 'Technovation awards'; Winners of the competition were as follows : 1) Rajapur High-school, Ratnagiri (First Prize winner) – Project : Extendable Mechanical Legs 2) VPUA school, Waghera (Nasik) (1st runner-up prize) – Project : Bamboo Pole Fixing machine 3) Hindustan Antibiotics

School, Pimpri-Chinchwad (2nd runner-up) – Project : Adjustable school bench 4) DMNPV, Chikhali, Pimpri-Chinchwad (Appreciation prize) – Project : Garlic planting machine.

During the event, a compilation of student's project book "Vocational Education – Teacher Guide (Grade 6–8)", developed by the Vigyan Ashram and STARS Forum team members, was officially released at the hand of dignitaries.



Event was attended by more than 1200 educators, teachers, parents along with esteemed guests from the education department Mrs. Dipali Jogdande (SCERT), Mrs. Aruna Yadav (SCERT), Mr. Yadunath Deshpande (NCERT), Ms. Nimrat Kaur (Azim Premji University), Mr. Navneet Ganesh (NCERT), Mr. Manish Pandey (EkStep Foundation). Our funding partners Mr. Sujit Dixit (Tata Technologies), Mr. Ashutosh Deshpande (Mahle Engineering), Mr. Yogesh Kapse (Schaeffler India), Mr. Bobby Zacharia (Eaton India Foundation), Mr. Mandar Pophale (Praj Foundation), Mr. Potatrao Kale (Pravin Masalewale) were Chief guest of the program.

B] Skills training workshop for women

The EDP department conducted Solar drying of vegetables & pre-mixes training on 25th & 26th February at AS Polytechnic College, Wardha. Training was attended by 22 WSHG members to learn scientific drying of vegetables (calculating loss-on-drying, blanching) and pre-mixes (Gajar-Halwa mix, Pooran-mix). Mr. Ganesh and Ms. Dnyaneshwari conducted hands-on sessions and guided participants on starting new enterprise.



C] Heritage walk @ DIY Lab, J.P Naik Centre of Education (Pune):

Maharashtra Times 'Club Heritage', Lokmanya Multi-purpose co-operative society limited and H.V. Desai Mahavidyalay organized 'Heritage walk' at J.P Naik centre Pune on 1st February. Dr Yogesh Kulkarni introduced visitors about legacy & contribution of Dr. J. P. Naik in the Indian education system. Approx 80+ people participated in the walk. They also visited DIY lab to explore various activities like fabricating rocket-launcher from recycled PET bottles, use of laser cutter & 3-D printers etc. Watch Instagram reels about walk on <https://www.instagram.com/reel/DUNkXNSqkV/?igsh=MTFxMXNtbmg1NHp4>

प्रयोगशाळेच्या भेटीतून उलगडल्या रंजक गोष्टी

हेरिटेज वॉकला वारसाभेटीचा उत्कृष्ट प्रतिवाद

म. टा. प्रतिनिधी, पुणे

अलकाशात श्रेय घेणाऱ्या रिकेटमागील तंत्रज्ञान. जे. पी. नाईक यांचे भारतच्या शैक्षणिक क्षेत्रातील योगदान, कॅम्ब्रिज मॅगझिन, शेतीतले प्रयोग या सारख्या एकेकित्ता दर्शन आणि माहिती घेण्याची संधी वारसाभेटीचा विज्ञान, निमित्त होते. हेरिटेज वॉक या उपक्रमात विज्ञानश्रमचे शहरा अलग्ग्या कोथरूड येथील 'डू इट युअरसेल्फ प्रयोगशाळे'च्या भेटीचे.

'लोकमान्य मल्टीपुंज को-ऑपरेटिव्ह सोसायटी लिमिटेड', 'एचएचट्रॅडर्स', 'कॅम्ब्रिज हेरिटेज' आणि 'एच. व्ही. देसाई महाविद्यालया'चा इतिहास विभाग यांच्यातर्फे या



हेरिटेज वॉक या उपक्रमात विज्ञानश्रमची शाखा असलेल्या कोथरूड येथील 'डू इट युअरसेल्फ प्रयोगशाळे'ला भेट देण्यात आली.



योगेश कुलकर्णी

उपक्रमाचे आयोजन करण्यात आले होते. 'भागावट टाइटम' या उपक्रमाचा मॉडिअर पार्टनर आहे.

विज्ञानश्रमचे संघालाक योगेश कुलकर्णी यांनी जे. पी. नाईक यांच्या कार्यची माहिती दिली. स्वतंत्रपुर्व कालखंडात नाईक यांनी कन्नड भाषेतून परीक्षा देऊन मॅट्रिकला प्रथम क्रमांक मिळविला. ब्रिटिशराजविराधीतील भूमिकेसाठी

तुळंगवास पाकराला त्यांनी तुळंगामध्ये कैसांची वैद्यकीय सेवा केली. कोल्हापूर शहराच्या उपभारणीमध्ये महत्त्वाचे योगदान दिले. ज्येष्ठ राईलिव्हिक पु. ल. देशांभे यांनी जे. पी. नाईक आणि विद्या नाईक यांच्या लग्नात घेतलेला पुढाकार, लग्नसमयाभ्यांचेछायाचित्रण आणि चित्रोत्तरण करण्यात भालजी पेंढारकर यांचे योगदान, अशा अज्ञात

गोष्टी कुलकर्णी यांनी सांगितल्या. इंडियन इन्स्टिट्यूट ऑफ एज्युकेशनच्या उभारणीत नाईक देऊन विज्ञानश्रमच्या उभारणीत डॉ. श्रीनाथ कालबाग, डॉ. राम ताकवले, डॉ. अनिल काकोडकर यांचे योगदानही कुलकर्णी यांनी स्पष्ट केले. प्रयोगशाळेची माहिती किर्लोस गायकवाड यांनी दिली. 'या

प्रयोगशाळेत विद्यार्थी स्वतः शिक्षण घेऊ शकतात. सध्या देशभरातील अटल टिकरिंग लंबासाठीच्या अभ्यासक्रम साहित्याची निर्मिती येथेच होते. शिक्षकांना येथेच वेगवेगळ्या प्रकारचे शिक्षण दिले जाते. स्वतःच्या कल्पनांवर काम करू शकण्याच्या यथेच्छ सुविधांचा लाभ घेता येऊ शकतो,' असेही गायकवाड यांनी सांगितले.

संस्थेच्या आवागातील शेतीच्या प्रयोगांची माहितीही उपस्थितांनी घेतली गेली. सार्ध ७०हून अधिक कर्षोत्प्रेषण भविष्यचे प्रात्यक्षिक दाखविले. भौतगे यांनी तयार केलेले 'शंभू आणि त्याचे फायदेही समजून सांगितले. साक्षिक अहमद यांनी लेसर मशिनद्वारा काय करता येऊ शकते, याचे प्रात्यक्षिक दाखविले. कार्यक्रमाचे अध्यक्ष प्रा. डॉ. गणेश राऊत यांनीही उपस्थितांनी संवाद साधला. उमेरा फोटे यांनी संयोजन केले.



D] Diploma in Basic Rural Technology (DBRT) course updates:

The month of February was full of learning & enjoyment for DBRT students. Following are some of the key skills training & soft-skills development activities as-

- DBRT students participated in 'Science-Day' exhibition at GMRT, Khodad (Pune) with innovative products like Beetle- a wheelbarrow for dung removal, Peanut roaster, Water indicator for well & food products.
- DBRT students (7 girls and 2 boys) enrolled for the Bank of Maharashtra sponsored short-term skills training program by Rural Self-Employment Training Institute (RUSSETI, Hadapsar, Pune). Students will learn skills in garment design, imitation jewellery, basic beautician and fast-food restaurant enterprise training.

- A team of 6 DBRT & DIC students participated in 'Shivneri Marathon' at Junnar (Pune) for 21km, 10 km and 5 km distance. Badal Rathod recured 3rd rank with his 105 min timing in 21 km distance run.
- On 16th February, a 'agricultural-drone- technology' field demonstration was held at Pabal campus for DBRT students by Mr. Ajit Walunj (Shri. Sadguru Krushi Seva Kendra -Khadakwadi).

Section specific skills training updates:

- Engineering section: Students of engineering section learnt fixing roof-sheets and chain-link fencing mesh for cow shed on campus & private poultry farm in Pabal village. Students learnt RCC column fabrication & fabricated a compound wall & new plant-nursery structure as a group project.

Students also completed wall-painting for the boys' hostel and plumbing work for the new-hostel building.

Total value of their community service was Rs.7,8590 including Rs. 14,028/- students learning.



Energy & Environment section: In this section, students completed community service orders for installation of ceiling fans & electrical water heaters. A group of 4 students completed wiring work of 3 rooms in a new-guest



hostel. Apart from this, students learnt servicing & overhauling of diesel generator, re-winding water pump and installation of 2 units of solar streetlamp. Total value of community service was Rs. 60,422/-.

Home & Health section: In Home & health section, students processed 12 kg of Amla for preparing products (Amla-Candy, Pickle and Supari), 3 kg Tamarind (for sauce) and 28 kg bakery flour (for bread). DBRT students put dosa stall in Pabal yatra and sold '4 type of Dosas & Bhel'. They earned a community service of Rs.8,800/-. The total value of section community service was Rs.27600/-.



DBRT Students stall at Pabal Yatra

Agriculture section: In the farming section, students learnt plant-nursery technique while preparing Papaya seedling.

Around 50 dead fodder cactus plant seedlings were discarded due to the wrong planting method. Students worked in a polyhouse to harvest 15 kg capsicum (last harvest) and 4 kg spinach. In the dairy farm they learnt Artificial Insemination (AI) for cows and worked for regular feeding & milking of cows.

Computer section: Students documented their learnings on personal blogs.

(<https://alumni.vigyanashram.blog/dbrt-batch-2025-26/>). They also practiced advanced tools for electrician (load calculator), food-processing (Kitchen stories AI), Engineering (metal weight calculator) etc.



Polyhouse preparation

E] Technology development & Design Innovation Centre (DIC) updates:

- Under the DST-SUNIL program, Vigyan ashram team conducted a 2-day training workshop on fabrication of solar-dryers at Dr. Hedgewar Seva Samiti Krushi Vigyan Kendra (KVK) Nandurbar. Training was organized on 12-13th February with 20 participants including local fabricators, NGO partners and food-entrepreneurs. Participants learnt design components, material selection, fabrication (metal cutting, welding etc), assembly of solar-cabinet (5 kg loading capacity) and solar-dome dryer (200 kg loading capacity).
- DIC team completed fabrication of 2 units of 'solar cabinet dryer' (2 units) for Mr. Sachin Patwardhan (Ratnagiri) Women Self-Help Group drying enterprise. (VATF)



Solar dryer construction

Black-Soldier-Fly (BSF) & Backyard poultry farming:

- Mahesh fabricated a BSF rearing system (1.5m² breeding chamber, 5 days old (5 DOL) & adult larvae rearing unit) for BAIF Agriculture Research & Development Trust, Urali-Kanchan (Pune) campus. This trial setup will be sufficient for processing 20–25 kg waste per day as an experimental unit. (VATF)
- In February, 483 kg pupae and 48 kg pre-pupae were produced by processing 36.2 tons of wet waste at Rajgurunagar Municipal Corporation using Black Soldier Fly (BSF) larvae. From the breeding chamber 1316 grams of BSF eggs were collected for a continuous processing cycle. To increase egg production, the breeding chamber structure was modified with an additional dark cage (Pupae hatching 72 Sqft) and adult fly mating cage (104 sqft). At present, egg production is around 35 gm/day with modification expected to increase up to 100 gm/day. (VATF)
- For BSF larvae-based poultry feed trial, 10 units of bird rearing cages were distributed to selected tribal & Economical Weaker Section (EWS) farmer beneficiaries in Ambegaon and Rajgurunagar block. These farmers have been trained in scientific backyard poultry farming under the DST-SUNIL program.



Dark cage for BSF

Other technology development project updates:

- Pranit installed a smart-phone based pest identification application at polyhouse of Mahakrushi FPO (Pandharpur) on 5th February. He also installed a new-modified weather data monitor at Jayesh Farm (Talegaon Dhamdhere, Pune) on 9th February.
- Abhijeet conducted a Vibro Thermal Dryer (VTD) trial on wheat at 50 °C drying temperature. The trial showed drying efficiency (~17%), reducing grain (wheat) moisture from 26% to 9.3% in 60 minutes. He is working on improving its functionality (vibration, grain retention time, airflow etc.) for working prototype development.
- Yashwant conducted a trial on a 'millet-flex' making machine to identify problems in its rolling mechanism. He found that the rollers are not providing even-press (less than 0.3 mm) due to improper alignment. Team is consulting with manufacturer for re-designing or repairing roller mechanisms.
- In the Plant Tissue Culture (PTC) lab, Sayali treated 12 hrs pre-soaked moringa seeds with Gibberellic acid & Bavistin followed by treatment of Sulphuric Acid for 10 min. Treatment is showing positive effect on germination and growth of moringa plants in PTC conditions.
- Amisha also worked in the development of 'lesson-plan' for Bacterial art (also called *agar art*). It's a creative technique for school students to learn the basics of micro-biology through hands-on activity.
- Shreyas conducted a session on "Application of AI in agriculture" at Shri Shiv Chhatrapati College, Junnar, on February 17.

- Yashwant & Arun conducted sessions for engineering college students on 'Design-Thinking – experiences of Vigyan Ashram' at KTHM Engineering College (Nashik) and Amritvahini Engineering college, Sangamner on 21st & 22nd February respectively.
- Aditya Sonawane, (B.E Chemical Engineering) from Gharda Institute of Technology (GIT) and Sanskruti Deokar (B.E. Mechatronics) from Marathwada Mitra Mandal's Institute of Technology (MIT), Lohagaon, Pune, completed their 1-month internship program. Nachiket Bagal (Instrumentation and Control Engineering), Hritik Devasi (Computer Science) and Ayushya Maurya (Electrical Engineering) joined the DIC internship program.



Dr. Yashwant at KTHM college

F] Entrepreneurship Development Program (EDP) update (VATF):

Training workshop: In February month, the EDP team conducted variety of training-workshops for budding enterprises. Following are details of training as –

- Ice-cream & kulfi manufacturing: This training was conducted during 7th & 8th February at Jarkarwadi, Tal- Ambegaon (Pune). A total 11 participants from Pune, Mumbai, Nasik and Jaipur (Rajasthan) attended training. Mr.Suraj Kakade (VA alumni & promotor of Suraj Ice-Creams) was resource person.
- Spice production: This training was conducted during 11th & 12th February at Pabal. 37 Women Self Help Group (WSHG) members associated with WOTR institute attended the training. Successful entrepreneur & trainer Mrs. Ashwini Thorat conducted hands-on training sessions.

Exhibition & marketing linkages: As a part of marketing linkage Kalubai Van Dhan Kendra (Taleran) exhibited their products (rice, medical NTFP material) at ASMITA Bhavan, Manchar (Tal- Ambegaon, Pune). The exhibition was organized by BAIF institute for providing direct market linkage to tribal farmers. Vaan Dhan Kendra sold products worth Rs.8,000/-.



Hero of the month: Mr. Dinesh Asawale (Kondhare, Tal: Ambegaon, Pune) started a free-range poultry farm with 350-400 desi-breed birds. Dinesh was students of short-term poultry farming course (batch 2025). Now he is getting on-field technical support. Dinesh uses canteen waste for free-range birds in combination with pellet feed. He has invested Rs.60,000/- and earning a steady income of Rs.7000/- per month from the past 6 months.

G] Integrated waste management @ Savardari village (VATF):

A project on implementation of 'integrated waste management' at Savardari (Khed, Pune) was formally inaugurated on 20th February in the presence of Honourable MLA Shri. Babajisheth Kale and Shri. Dilip Mohite-Patil (formal MLA), Dr. Mallinath Kalsheti (Director, YASHADA), Savardari village Sarpanch Shri. Santosh Pawar,

and Shri. Gaurav Chaudhari (CSR, Schaffler India). Ranajeet & Mahesh presented the overall scope of the project and appealed villagers to support in successful implementation of the program. On waste processing site, construction work of 'waste-processing shade' (3600 Sqft), water-supply and electrical connection have been completed by Grampanchayat. We are expecting to start awareness & waste-processing activities from April month.

G] Make-a-thon for ITI students:

In the month of February, two batches of make-a-thon on advanced fabrication technology were conducted for Industrial Training Centre (ITI) students. Students learnt Computer Aided Design (CAD), ARC & CO₂ welding, plasma cutting & CNC turning, powder-coating skills while completing fabricating a specified item as per customer need. Students training details are as below –

- Batch 1 (9th to 13th February) - 14 students from Welder & Fitter trade from Government ITI, Ghodegaon participated in the Make-a-thon. They completed fabrication of a wardrobe & bookshelf for guest-hostel and cloth display stand for ASMITA unit.



- Batch 2 (23rd to 27th February) - 22 students of welder trade from ITI

Lokpanchayat Ghargaon, Kurkundi (Dist- Ahilyanagar) participated in the Make-a-thon challenge. They completed for fabrication of an EV wheelbarrow for agriculture section, dining table for kitchen and wardrobe for guest hostel.

H] School based vocational program updates:

IBT – Introduction to Basic Technology:

- On National Science Day, Tribal Ashramshala Padsare organised 'Chhote Scientist Competition'. IBT students demonstrated 18 projects during the competition. The program was attended by Ms.Zareen (CSR Head, Afcon), and the Afcon team, along with representatives from Janaprabodhini and Mrs Bhakti and Mr Sharad from Vigyan Ashram.



Chota Scientist Competition at Padasare

- Kaushal Mela was successfully conducted at, Gram prabodhini Vidyalaya, Salumbre school on 3rd Feb, ,MLA Prakash Devale Madyamik Vidyalaya Shirgaon school on 14th Feb, Kulswami Khandaray Vidyalaya, Hiware on 17th Feb, Shri. Bhairavnath Madyamik Vidyalaya, Vahangaon school on 21st Feb and Sumati Balwan Katraj School on 28th Feb. The mela provided a platform

for students to showcase their skills and project-based learning through various demonstrations and activities.

- Praneet and Bhakti visited Gramin Prashala, Madaj, Dist. Dharashiv to review progress on 2nd Feb. A plan of action was made with teachers and instructors to take the program to next level.
- Students of H.A. Pimpri school are working on Mushroom cultivation project. They kept mushroom bags in dark room for 20 days. The rooms are getting warmer than required, so students tied shed net from inside the room to keep the temperature under control. Students are recording humidity temperature regularly.



Mushroom cultivation

Vocational Education program @ PMRDA schools:

In STEM education program, schools are conducting following projects:

1. New English School, Tilak Road, Pune - Tie and Dye & Making Bio enzyme
2. MSGGV School, Pune – Home automation and plant nursery
3. NEMS School, Pune – Terracotta jewellery & cooking without fire
4. Saraswati Vidyamandir, Karve Nagar, Pune – Family health manual.



Toy making activity at Teachers training program

Learning By Doing (LBD) (Uttar-Pradesh):

In the month of February, we conducted refreshers training for 454 teachers in 5 batches. Each training was for 3 days.

Video shooting for content development was conducted at PM Shri Basic school in Lucknow and UPS Rampur in Unnao.

STEM program in West Bangal

STEM training videos in Bangali are available on https://banglarshiksha.wb.gov.in/Frontend/stem_education

STEM Manual in Bangali is available on <https://vigyanashram.com/book/stem-bangla-final-part-1-11th/>

and <https://vigyanashram.com/book/teachers-manual-for-stem-education-part-2-west-bengal/> .

I] FAB lab & DIY lab update:

- Fab Academy students completed assignments on laser and vinyl cutting, 3D scanning and printing, embedded programming and electronic design. They have also finalized their project ideas and started presenting it to local evaluators.
- In Do-It-Yourself lab, students learnt tie & dye, basic electronics and digital fabrication skills while working on following projects as -

SN	Project name	Project details
1	Automatic flush for male urinal at Pune office	https://aaravgaikwad47.blogspot.com/2026/02/automatic-flush-system.html
2	Monochromatic Light Making using RGB LED	https://youtu.be/Yy_Jny1l7ng?si=Trc2nZAuO8vLMFId
3	Making series and parallel circuits using conductive dough	https://youtu.be/epeJUDqZdIk?si=BCp_sibOewrlsPSd
4	Making simple circuit with variations using tactile activity	https://youtu.be/319vUwIRZAE?si=9VjOcqiy1LEpgtz4

J] Other titbits:

- i. The ASMITA team completed order of 212 T-Shirts. They also conducted 2 days training workshop on 'Imitation Jewellery' making at Jana Pradhodhani Centre, Velha (Pune) on 17th & 18th February.
- ii. Dr Arun, Dr Yashwant and Shreyas visited Poaceae Life Design (Nasik), a bamboo processing unit on 20th February for discussing innovative fixtures & equipment required in the bamboo industry. They also visited traditional-potters in Astegaon and Kokamthan villages (Dist- Ahilyanagar) to study furnace design & scope for fuel improvement.
- iii. Prasad Patil resigned from his position of DIC-manager after 5+ years of service. We wish him best-luck for future endeavours.
- iv. Yogesh, Ranajeet & Pranit participated in the Department of Science & Technology (DST- SEED division) Expert Committee (EC) review meeting at South Asian University (SAU), New Delhi on 16th & 17th February.
- v. Bhakti & Ranajeet attended 'Seva-Tarang-2026' a capacity building & networking event of voluntary organization at BAIF Pune on 26th Feb & 1st March.
- vi. Yogesh attended Third Text book development workshop for Grade 11 Vocational education subject on 17–18 February 2026 at Azim Premji University, Bengaluru.
- vii. Weather record – Rainfall of the month – 00 mm (Total: 793.87 mm), Max temp-35.00° C, Min Temp – 19.00° C, Humidity –59 %, Water height in well– 2.80 m, Waste-water COD- Boys hostel- 200 ppm, Girls hostel- 240 ppm (within limit).
- viii. Energy consumption record- Electricity unit – III Phase- 2264 units, I Phase import- 257 units, solar generation III Phase – 1262 units & I Phase- 507 units, Solar generation (off-grid)-82 units, DG used – 03:05 Hrs, Biogas- 23 m3 (460 kg dung used).
- ix. Animal Husbandry section update – Milk production –454 Kg (Loss Rs:2768.00), Goat farm – 2 new goat kids added in stock (average weight of kid -99.16 gm/day).
- x. Online visitors: www.vigyanashram.com –2228 (Organic-1378, Other-850), Pabal campus visitors: 219.

JJ Data Report: <https://tinyurl.com/4whnwee2>

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Photo Gallery:



Books Stall by VA at Technovation



3D Scanning: FAB Academy Assignment



Paper circuit activity at KGBV Namkum, Ranchi



Masala making workshop at Pabal



Hydroponics Installation on window



Jewellery making workshop at Asmita lab

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